

American Artisan

Founded 1880

The Warm Air Heating and Sheet Metal Journal

Vol. 98, No. 14

CHICAGO, OCTOBER 5, 1929

\$2.00 Per Year

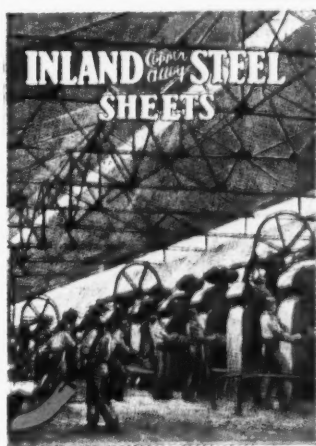
TRUSTWORTHY SHEET METAL

Inland Copper Alloy Steel Sheets

work up easily and well. They endure three to five times as long as ordinary steel or iron. Builders and manufacturers who have used this material know they may depend on the splendid qualities of these sheets.

WORKABLE

A complete control of production and a long experience enable Inland to furnish the proper sheet for each particular purpose.



ENDURING

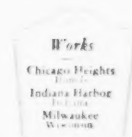
Unbiased service tests prove these sheets are unsurpassed in resisting corrosion. Their use insures longer life for your products.

Read the Facts

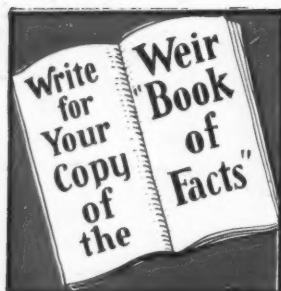
A facsimile of the front cover of our descriptive booklet is shown above. In it the facts are presented clearly and concisely. Send for your copy today.



INLAND STEEL COMPANY
38 South Dearborn Street
Chicago



SHEETS BARS PLATES SHAPES RAILS TRACK ACCESSORIES RIVETS BILLETS



THIS YEAR IS THE BIGGEST, BUSIEST AND MOST PROFITABLE IN WEIR HISTORY-- YOU ARE INVITED TO JOIN THE PROGRESSIVE, PROSPEROUS WEIR FAMILY OF DEALERS :: :: :: ::

IT is especially gratifying to us to be able to say that we are busier now than at any time in the history of this Company. The month of August showed a 50% increase in business over August of 1928 and *the month of September was the biggest month on record*, taxing our recently increased manufacturing facilities to the utmost.

As the remaining three months of the year are normally the peak months for our industry it is practically a certainty that the year 1929 will show a substantial increase over 1928 which was a splendid year for us.

This highly favorable showing is due to the *High Quality* of the Weir and is a true reflection of the business Weir dealers are enjoying. It is all the more impressive because of the prevailing price situation and proves beyond a doubt that more and more dealers are learning the truth of the fact that *the public IS interested in high quality—price be hanged.*

If you are the type of dealer who knows that it is more profitable to sell *better* warm air heating installations you will find that the Weir is the ideal furnace for your needs.

We shall be pleased to have a Weir representative call on you—*without obligation*—and explain how our Dealers are finding it increasingly easier and decidedly more profitable to sell the WEIR Furnace.

**THE MEYER FURNACE CO.
PEORIA-ILLINOIS**

**The
Original
Steel Furnace
Now In Its
Forty-Seventh
Year**

WEIR

**Made by
The Founders
of the
Steel
Furnace
Industry**

HERE THEY ARE / MIDLANDS 3 GREAT PRODUCTS ... the Cleaner Heat Series

MIDLAND products are manufactured in a new, up-to-date \$250,000.00 plant, a plant producing steel furnaces exclusively and not as a side line.



THE Midland line gives you an unlimited scope and complete systematic dealer cooperation, making it possible for you to reach all prospective buyers.

Investigate.



THE MIDLAND FURNACE CO.
COLUMBUS, OHIO

MIDLAND FURNACES

ALL STEEL ♦♦♦



CLEANER HEAT

No. 4 of a series of advertisements on the ease and simplicity of NIAGARA Furnace assembly and installation.



On goes the Radiator ~No fitting or adjusting needed

FREE from the front section, the one-piece Niagara radiator just naturally drops into place. There's no juggling around—no fitting or adjusting to make certain it's smoke-tight. Recesses on top of the feed section and the flanged covered joint take care of that. There's a cap on both radiator and front. Clean-out collar is cemented and bolted on. To put in the friction clean-out plate, just push in and give it a half turn. It twists out quickly and easily for cleaning.

Size for size, it's the lightest one-piece radiator on the market—and the easiest to handle. Skillfully cast walls of even thickness do the trick.

Next month we'll show you how easily the upper front slides into place. Watch for the ad.

THE FOREST CITY-WALWORTH RUN FOUNDRIES CO.

Member National Warm Air Heating Association

2500 West 27th Street — Cleveland, O.



—one piece radiator,
collars extending
through casing.

NIAGARA

WARM AIR HEATING SYSTEMS

When writing mention AMERICAN ARTISAN—Thank you!

Pittsburgh, Pa. — Wagener-Proie Furnace Company.

Ravenna, Ohio — Ravenna Furnace Company.

Cincinnati, Ohio — Niehaus Furnace Repair Company.

Atlanta, Ga. — Moncrief Furnace Company.

Chicago, Ill. — Western Steel Products Company.

St. Louis, Mo. — MacRoy Supply Co.



Kansas City, Mo. — Kansas City Furnace Company.

Duluth, Minnesota — Marshall-Wells Company.

Omaha, Nebraska — A. Y. McDonald Manufacturing Company.

Lincoln, Nebraska — A. Y. McDonald Manufacturing Company.

Sioux City, Iowa — A. Y. McDonald Manufacturing Company.

Minneapolis, Minn. — A. Y. McDonald Manufacturing Company.

Fort Dodge, Iowa — Leighton Supply Company.

Fargo, N. D. — Fargo Cornice & Ornament Company.

Seattle, Wash. — McPherson Furnace & Equipment Company.

San Francisco, Cal. — Pacific Sheet Metal & Furnace Company.

Winnipeg, Man. — Marshall-Wells Company.

Saskatoon, Sask. — Wood-Vallance Company, Ltd.

Regina, Sask. — Wood-Vallance Company, Ltd.

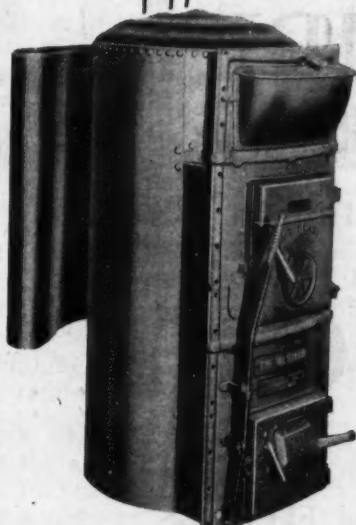
Edmonton, Alberta — Marshall-Wells-Alberta Company, Ltd.

For Your Convenience

For the convenience of Furnace Dealers everywhere Western Steel Products Company has established a network of jobbers that brings the sturdy Western Furnace within easy buying distance of every section of the country.

Get in touch with the one nearest you — let him show you the many advantages of the Western — the many reasons for its popularity that will put dollars in your pocket.

Or write for catalog 16. We'll be glad to send you information.



WESTERN STEEL PRODUCTS CO.

130 Commonwealth Ave.
DULUTH, MINN.

Pittsburgh, Pa. — Wagener-Proie Furnace Company.

Ravenna, Ohio — Ravenna Furnace Company.

Cincinnati, Ohio — Niehaus Furnace Repair Company.

Atlanta, Ga. — Moncrief Furnace Company.

Chicago, Ill. — Western Steel Products Company.

St. Louis, Mo. — MacRoy Supply Company.

Kansas City, Mo. — Kansas City Furnace Company.

Duluth, Minnesota — Marshall-Wells Company.

Omaha, Nebraska — A. Y. McDonald Manufacturing Company.

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Winnipeg, Man. — Marshall-Wells Company.

Saskatoon, Sask. — Wood-Vallance Company, Ltd.

Regina, Sask. — Wood-Vallance Company.

Edmonton, Alberta — Marshall-Wells-Alberta Company, Ltd.

*Look at it from
this angle—*



or this angle—



or any angle you can think of
and you'll find that

“HANDY PIPE”
and FITTINGS
are designed to eliminate

Friction

and so is our service —

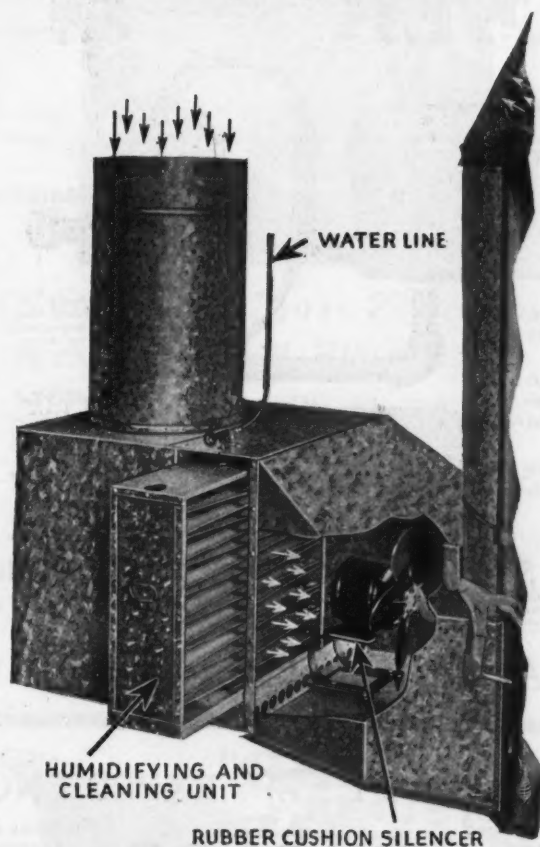
YOU can obtain HANDY PIPE and FITTINGS promptly from Jobbers everywhere—and REGISTERS, COLD AIR SHOES AND ELBOWS, BONNETS, GRILLES, COLD AIR FACES, HUMIDIFIERS, HEAT REGULATORS, FURNACE FANS, DAMPERS and *all* supplies and specialties as well as HANDY PIPE and FITTINGS direct from—

F. MEYER & BRO. COMPANY
PEORIA, ILLINOIS

EVERYTHING YOU NEED FOR HIGH GRADE WARM AIR HEATING INSTALLATIONS

Say you saw it in AMERICAN ARTISAN—Thank you!

NOW--an air conditioning unit for every warm air heating system—



KORECTAIRE
The CORRECT AIR MACHINE

Easily Installed

HUMIDIFIES—Correct, ample, efficient and automatic humidifying is a fact with the KORECTAIRE. The patented design of the humidifying plates assures complete moistening of all air passing the specially designed and equipped humidifying plates without retarding air flow.

CLEANS THE AIR—All the dirt and dust particles in the air are caught by the plates which attract all foul matter in the air as it passes over the moistened surfaces.

FORCES AIR—The fan is our own Special Design, highly efficient, free from noise, maintaining even, steady pressure in all parts of the air passages.

Notice mounting of the motor on spring frame and sponge rubber plate which eliminates noise and vibration.

Your trade will be interested and easily sold—let us tell you all about the KORECTAIRE now—write today for full details and prices.

WATT MANUFACTURING CO.
STERLING, ILL.

A-C

Thermostatically Controlled

Automatic HEAT BOOSTER

... COMPLETE



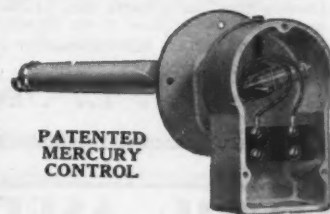
TO THE DEALER

No. 9 Size Unit with 10-inch Outlets, Mercury Control, Fan and Unit with Emerson Motor. Ready to Install

\$37⁵⁰

Includes Automatic CONTROL

**By far
the best buy
in the field
... ORDER
TODAY!**



PATENTED
MERCURY
CONTROL

Thermostatic Control Warm Air Furnace Fan Licensed under Re. Pat. No. 15531.

THE man who bids on furnace fan installations this fall with the A-C AUTOMATIC HEAT BOOSTER can figure a price and installation cost that will give him a definite advantage over competition—and still his regular profit will be assured. No other fan at anywhere near its price offers so much to the home owner—**AUTOMATIC OPERATION—SILENCE—PERFECT CIRCULATION.** Order your samples today or—

MAIL COUPON TODAY!

A-C MFG. CO., 417 Sherman St., Pontiac, Ill.

Gentlemen:—

Please send complete details about the A-C Thermostatically Controlled AUTOMATIC HEAT BOOSTER.

Name

Street

Town..... State.....

JOBBER'S NAME

A-C Manufacturing Co.
417 Sherman St.—Pontiac, Ill.

It keeps the
furnace water
pan filled

SKUTTLE Automatic HUMIDIFIER

It is fool proof,
always works,
and costs little

Every warm air
heated home is a
live prospect ~

A WARM air furnace installation is the only heating system which provides proper humidity—if the water pan contains water.

It is only natural for folks to overlook this fact and forget to fill the pan. Here is a simple, inexpensive Automatically Controlled Humidifier which keeps the furnace water pan filled at all times.

It is easy to install—easy to sell and besides the profit on the sale it makes sure that your customers will get humidified heat. All parts are made of high grade material—the valve seat is of Bakelite and can not be put out of order by impurities in the water.

The Skuttle can be attached in a few minutes to any warm air furnace that has a water pan. It is so important that many furnace manufacturers include it as standard equipment on their furnaces.

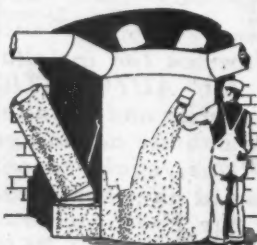
Write for full mechanical details and prices today.



Sold by
Jobbers
everywhere
Write to
your Jobber
or us for full
details

The J. L. SKUTTLE COMPANY, Dowagiac, Mich.

LIQUID ASBESTOS In WHITE or COLORS



BRAND new numbers in attractive fadeless colors in furnace covering, coating, and insulation. JUST WHAT YOU NEED to increase your sales. Each attractive installation sells another. Spreads with a brush. Easy to apply—no cutting and fitting—no paste. TAKES THE PLACE OF ASBESTOS PAPER on old or new furnaces. Apply over tin, galvanized iron, or paper covered surfaces. MAKE THE INSTALLATION 100% SEAMLESS with LIQUID ASBESTOS, the tailor-made suit for every furnace.

OFFERS NEW SALES TALK

HELPS INCREASE SALES. A trial order is convincing. There are many reasons why every furnace dealer should know about LIQUID ASBESTOS. It's far superior to any other covering.

FIRE AND WATERPROOF

Dealers who are using LIQUID ASBESTOS are getting surprising results. Ask for our SPECIAL DEALERS' PRICES TODAY.

B. & F. MFG. CO.,

Dept. 7,

Des Moines, Iowa

BACKED BY EXPERIENCE

Established
1902

Famous For
Service

CHICAGO FURNACE PIPE AND FITTINGS



A Better Installation Is possible now with this new Self-Locking Double Stack

CHICAGO Pipe has been the choice of thousands of furnace men for over 26 years—now this improved pipe represents extra value—the result of experience and modern manufacturing methods. It clicks together quickly and easily—stays together and makes a stack of unequalled strength.

Ask about it now—write for our Catalog No. 21—on Chicago Pipe and all Furnace Supplies

CHICAGO FURNACE SUPPLY CO.

1276-78-80-82 Clybourn Ave.

CHICAGO

PATTERNS FOR STOVES AND HEATERS

THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO

IRON AND WOOD

STOVE PATTERNS

QUINCY PATTERN COMPANY
QUINCY, ILLINOIS

PATTERNS

FOR STOVES AND HEATERS FIRST-CLASS IN WOOD and IRON
VEDDER PATTERN WORKS ESTABLISHED 1885 TROY, N. Y.

"American Seal"

FURNACE CEMENT

Roof Cement — Stove Putty
Plumbers Putty

PAINTS and SPECIALTIES

WILLIAM CONNORS PAINT MFG. CO.

TROY

Established 1882

NEW YORK

JAMES L. PERKINS

Western Distributor

140 S. Dearborn St., Chicago, Ill.

KU ~ NO



Locking
Wing

PATENTED

No Jar
or
Vibration

Newest and Most Practical WARM AIR REGISTER

NONE so simple to install, none so positive in operation and its **PATENTED** construction makes it the easiest to keep clean.

It is by far the outstanding **FREE AREA REGISTER**—notice the absolute minimum in air resistance and the attractive appearance presented by this simple design.

The wing lock is new—it holds the plate in any desired position without jar or vibration. The removable face with wing attached **SNAPS** in and out of frame. No Screws—No Springs.

Write for illustrated circular and prices—give us your jobber's name.

KU-NO REGISTER MFG. CO.
ST. LOUIS, MO.

FLORENCE

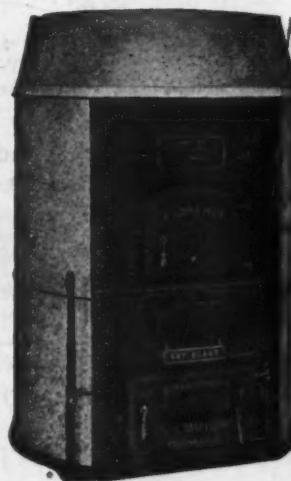
A real **HOT BLAST!**

A trade winner and
profit maker

A Florence Furnace has real sales clinching features that make the selling job easier. Guaranteed seven years. Patented Hot Blast feature which positively controls the fire by regulating the draft flow under and over the fire. Smoke, soot and gases are all consumed—nothing is wasted up the chimney.

The Florence delivers more heat with less and cheaper fuel. It changes the lowest grade coal to coke and produces fewer ashes.

The Florence is backed by an organization having sixty-eight years of manufacturing experience—one that stands squarely behind its dealers. Write us for full details of our proposition—it will not obligate you in the least.



Made in both Open Dome
and Radiator Types

C. EMRICH CO. (Since 1861) COLUMBUS, O.

Manufacturers also of the famous Florence Hot Blast Heater, Supreme Florence Circulator, Florence Cook Stoves and Ranges

"GEM" ADJUSTABLE REGISTER SHIELDS



Adjustable
10 in. to 19 in.

You, like many other retailers, must have noted the increased demand for "GEM" Adjustable Register Shields in the new Dull Brass as well as the also attractive Black and Oxidized Copper finishes. All three finishes harmonized well with the other furnishings and decorations in a room. Finished in Oxidized Copper and Black Enamel.

Retail at: "GEM" Floor Shield, Black, \$1.25; Dull Brass or Ox. Cop., \$1.50; "GEM" Wall Shield, Black, 65c; Dull Brass or Ox. Cop., 75c.

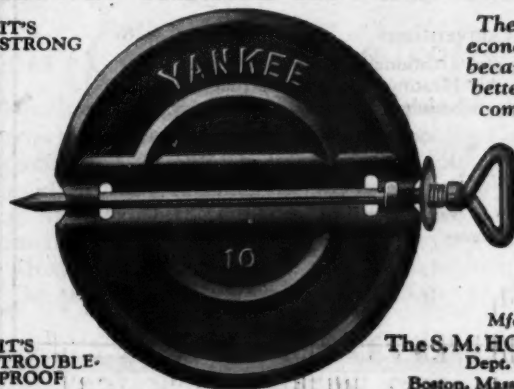


1140 BROADWAY, NEW YORK, N.Y.

BUY FROM YOUR JOBBER

HOWES YANKEE HOT-AIR DAMPER

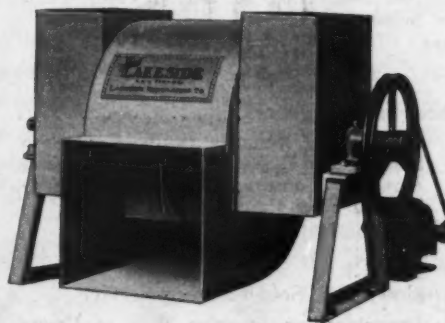
IT'S
STRONG



The most
economical
because it's
better and
complete

IT'S
TROUBLE-
PROOF

Mfd. by
The S. M. HOWES CO.
Dept. G.
Boston, Massachusetts



Helps Increase Your Sales

Every warm air furnace owner in your territory is a prospect for Furblo—the quiet, efficient furnace blower. Operation cost low—and it can be installed on old or new furnaces. Quiet in operation, Furblo does not interfere with free gravity circulation of air when not operating.

Let us tell you more about this opportunity for increased sales. Write for details, prices and discounts.

*** LAKESIDE COMPANY, Hermansville, Michigan**

Furnace Blowers in all sizes—for large or small jobs

Furblo

The Quiet Efficient  Furnace Blower

Entered as second class matter, March 26, 1928, at the Post Office at Chicago, Ill., under act of March 3, 1879. Formerly entered on June 25, 1887, as American Artisan and Hardware Record.

Founded 1880

American Artisan

The Warm Air Heating and Sheet Metal Journal

Yearly Subscription Price:

United States\$2.00
Canada\$3.00
Foreign\$4.00

Published EVERY SATURDAY—to Promote Better Warm Air Heating and Sheet Metal Work

PORTER - SPOFFORD - LANGTRY CORPORATION

139 North Clark Street, Chicago—Telephone Central 7670

Fred D. Porter, *President* John C. Langtry, *Vice-President* Howard H. Bede, *Secretary*
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New York Office: 1403 Pershing Square Bldg., 100 E. 42nd St. Tel. Ashland 5342

F. R. Whitten, Eastern Representative

Vol. 98, No. 14

CHICAGO, OCTOBER 5, 1929

\$2.00 Per Year

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Are you still ordering year-before-last model furnaces? Then add this one feature to bring them up-to-date

IF you were selling coal-oil stoves, now, you might get away with it. But to be *just a little* old-fashioned is too damning in this modern age. If you're going to sell modern heating systems, then be sure that they *are* modern. Money is made—in this day and generation—by being in step with the parade.

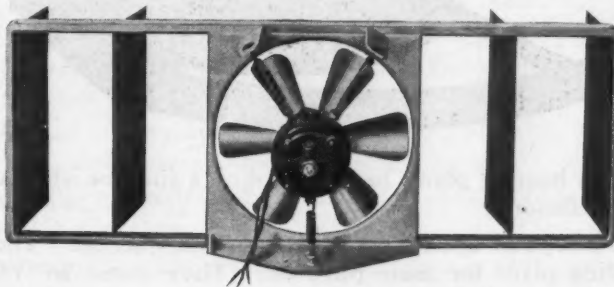
The warm air furnace has gone to stay—radiator systems are doomed. Manufacturers have been prophesying it. Now the prophecy is a fact. What people are demanding today, and what heating dealers, builders and architects are selling, is an AIR CONDITIONER. The AIR CONDITIONER is *here*.

Fortunately—for every dealer and manufacturer—the change has come without creating any out-styled or must-be-scrapped material. You can turn any furnace automatically into an AIR CONDITIONER by the simple

addition of three simple factors. These three factors are: a Reed Air Filter, a humidifier and a Miles Automatic Furnace Fan.

The Miles Automatic Furnace Fan is heart and soul of the AIR CONDITIONER SYSTEM. It sends the warmed air flowing regularly, lithesomely into every room of the house, at the rate of four complete changes of warmed invigorating air per hour. A Reed Air Filter cleanses this air of dust and germs, protecting children and parents from the danger of germ-laden air, protecting furniture, walls and draperies from dust and sooty stains—a

humidifier restores to the air the exact amount of moisture which nature decrees ideal. These two simple features added to your Forced Air unit turn an old-fashioned heating system into the latest, most modern, most luxurious AIR CONDITIONER.



Air Conditioning sells itself - Every home is a prospect

Physicians, health authorities and popular magazines have cleared the way for AIR CONDITIONING. Every man, woman and child now knows that filtered, moving, humidified air is what nature contrived as best for comfort and health. "The ideal temperature of a perfect June day" is a phrase that appeals to every one.

Most modern furnaces are now Air Conditioning units. If the makes you carry are not up-to-date ask their man-

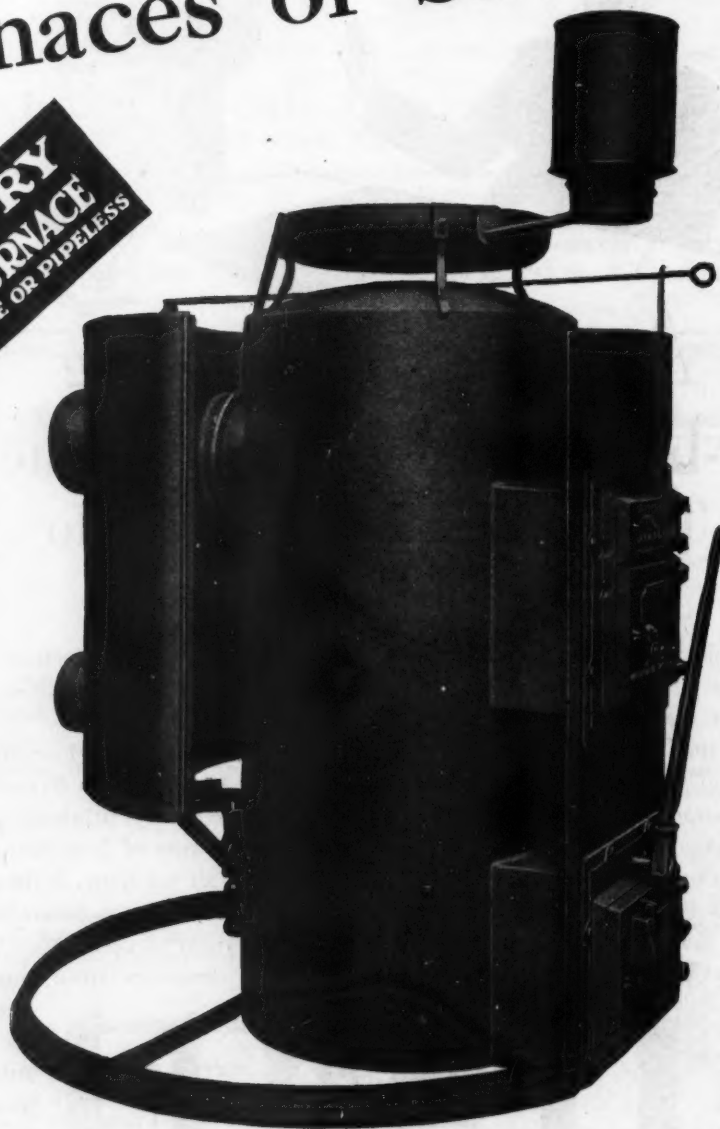
ufacturers *Why!* And transform the display models in your office into AIR CONDITIONERS by connecting them with a Reed Air Filter and humidifier and a Miles Automatic Furnace Fan. Send today for Reed Air Filter and Miles Automatic Furnace Fans for demonstration in your own office to THE WARM AIR FURNACE FAN COMPANY, 6521 Cedar Avenue, Cleveland, Ohio. Telephone RAndolph 4318.

REED AIR FURNACE FILTERS
MILES AUTOMATIC FURNACE FANS

Say you saw it in AMERICAN ARTISAN—Thank you!

Which Do You Sell— Furnaces or Satisfaction?

WATERBURY
SEAMLESS FURNACE
REG. U.S. PAT. OFF. PIPE OR PIPELESS



WHEN a man buys a heating plant, he doesn't buy a furnace—he buys *satisfaction*—comfort, economy and efficiency.

Most of these buyers depend upon **YOU** for their satisfaction. They expect you to give them the very *best* heating plant for their purpose. They come to **YOU** because of your reputation as a specialist in your line.

When you sell them a Waterbury Seamless Furnace, you justify their confidence. You *know* you are selling them *satisfaction*. You *know* you are protecting your reputation. You are building your business and likewise your profits.

Why sell a furnace when you can just as well sell satisfaction and reap the profits that are coupled with it? Send for the Waterbury proposition—it will show you the way.

The WATERMAN-WATERBURY CO.

1122 Jackson St. N. E.

Minneapolis, Minn.

Philadelphia

Pittsburgh

Chicago

Complete Stocks Carried In

New Orleans

Kansas City

Denver

San Francisco

Seattle

Mention **AMERICAN ARTISAN** in your reply—Thank you!



American Artisan

The Warm Air Heating and Sheet Metal Journal



Vol. 98

CHICAGO, OCTOBER 5, 1929

No. 14

Clearing the Head of Mental Cobwebs

YOU in the warm air heating and sheet metal industries who have the power of observation will agree that a revolution is taking place in methods of merchandising. Just as the fighter of long ago, with his bludgeon, yielded to the man of cunning, so now the man of perspicacity is slowly capitulating to sheer intelligence. Scientists and others of superior mind are regenerating all departments of life. And the only one who apparently is failing to adapt himself in the new scheme of things is the warm air furnace salesman, with his stupid, cocksure swagger, and his ivory dome.

How long is it going to be before this major domo of the swivel chair, and the advertising men whom he dominates, come to realize that upon his shoulders rests the responsibility of awakening the public to the fact that the warm air heating system, too, has capitulated to scientists and men of research, and because of this surrender it can be made to succeed to a new and highly useful position in the home? How long are these men going to keep the public in ignorance of the corrective measures that have taken place in the warm air heating industry in the

last seven or eight years? How long are they by their lax indifference going to allow the public to be without that health-giving warmth made so easily possible with a warm air heating system.

Why is it that these men as a rule are so imbued with poisonous, petty hatreds for one another that they cannot release their executive powers long enough to lend their field men the assistance that these latter so sorely need? Is it because their minds are so befogged with petty jealousies that they have lost sight of the main issue at stake? Are they in this day of progress and enlightenment still seeking unintelligently after volume of business alone.

The average sales manager in the warm air heating industry appears to think that if he calls his men in off the road once a year for a good "bawling out" or berates them hotly in his correspondence he is discharging his duty. From some of the results he gets, he appears to think that as long as he lashes his sales teams into loading up dealer after dealer with carloads of furnaces, his firm is getting along in fine shape. However, take a look at the

other side of the picture. Ask some of these dealers whether either the salesmen who influenced them to take the furnaces or the high mogul over them offered any intelligent suggestions on how these furnaces might be successfully engineered into home owners' basements and there won't be one out of ten that will be able to say truthfully that he does get useful assistance.

The time is rapidly approaching now, however, when the science of selling is even going to percolate down into the warm air heating industry as it has in other lines, and the salesman who now thinks that his job is completed when he goads his sales force to load up the unsuspecting furnace installer with more products than said dealer can market successfully by himself is going to understand fully that it is just as much his job to sell those furnaces to the final consumer as it is the job of the furnace installer himself. The intelligent salesman has a right to expect intelligent cooperation from his field men, but he must realize that it is his duty and responsibility to furnish these field men with the effective ammu-

(Continued on Page 28)



A. Kealer
Associate Editor

Vari-FORMED PIPES

and

HOW to Construct Their Patterns

By A. Kealer

Instructor in Sheet Metal
Washburne Trade School

This Is the
Tenth Article
on Sheet Metal
Pattern Draft-
ing and a Con-
tinuation of
Those Inter-
rupted Last
Week

FROM plates 1 and 2 the student will draw 6 vari-formed pipes, namely, one triangular, one square, one oblong, one pentagonal or 5-sided, one hexagonal or 6-sided and one round. From plate 2 he will draw the tapers and pyramids as shown.

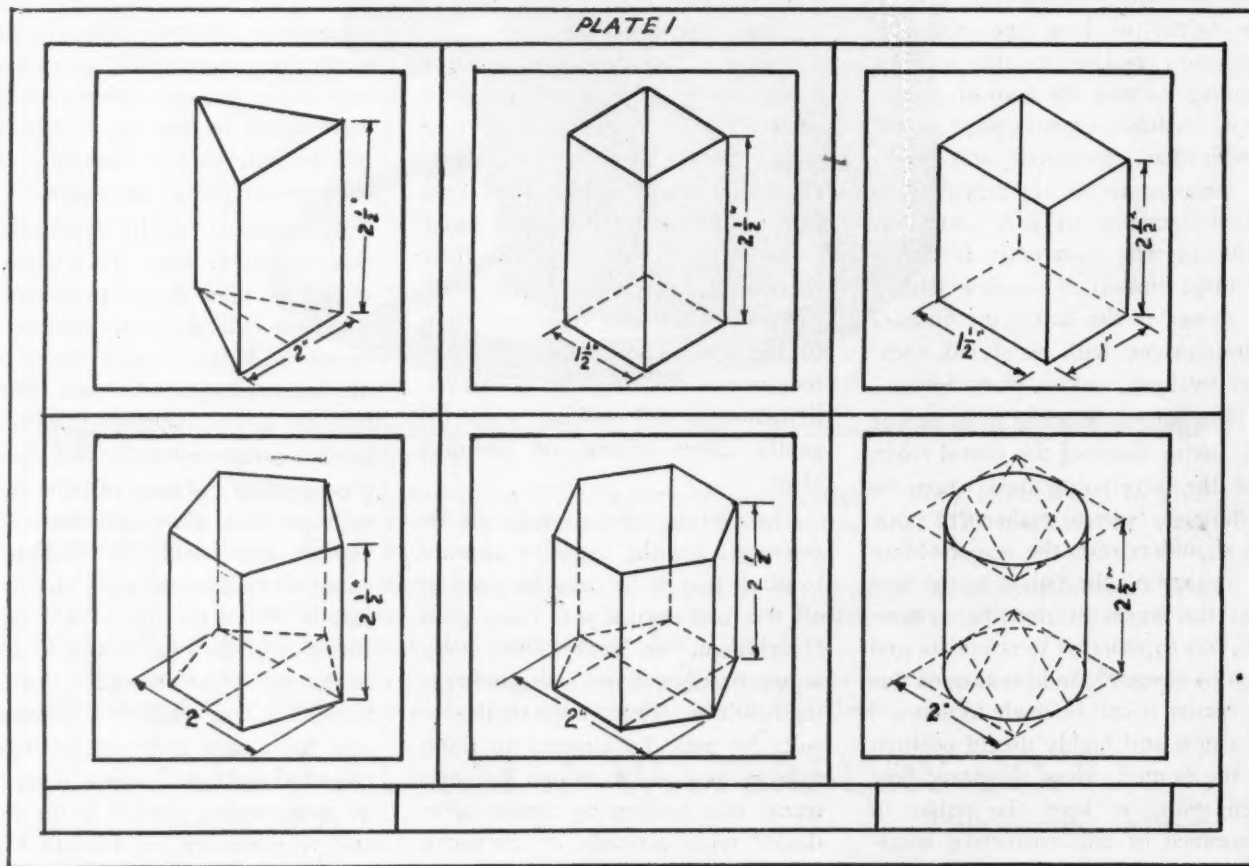
In the issue of September 21st, a

method was described how to change a geometric figure into an isometric figure. We will make use of that method now, to show the different pipes and tapers isometrically.

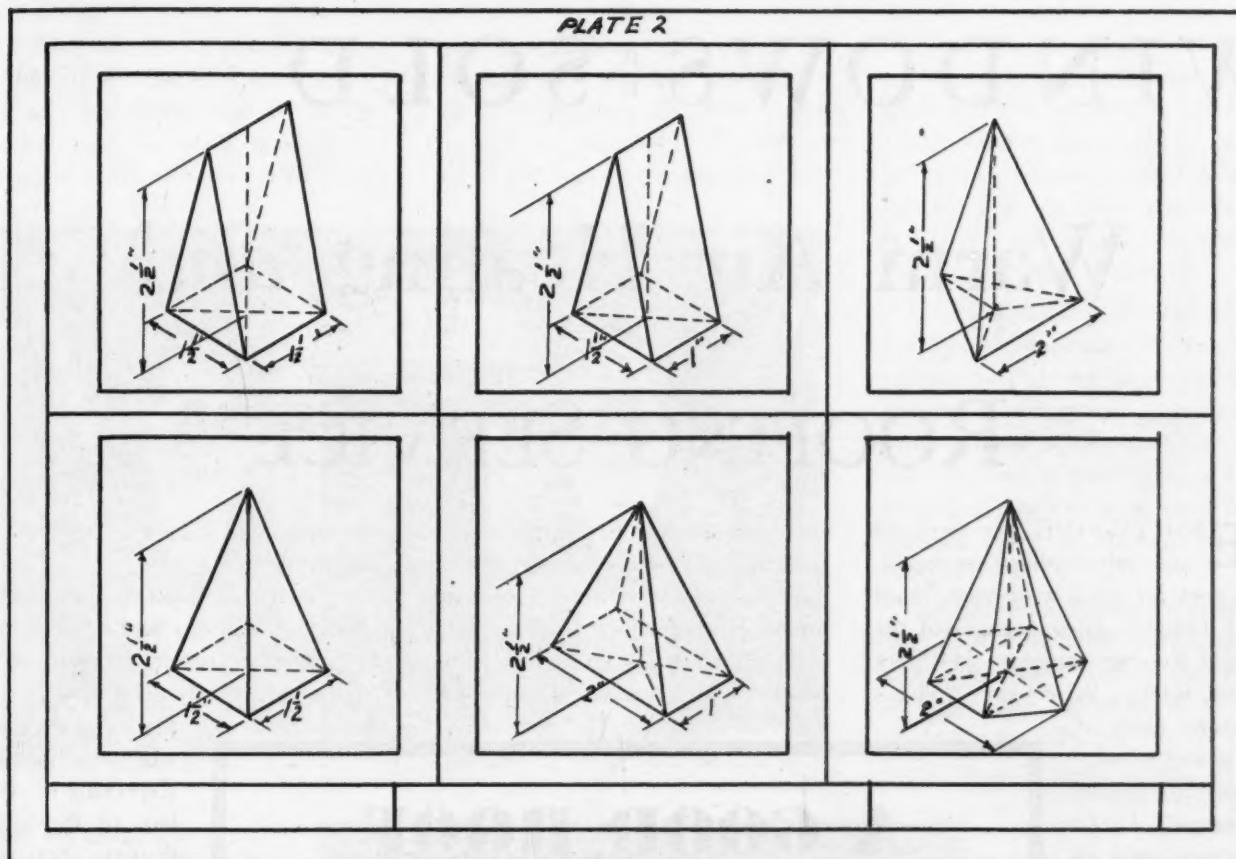
We first draw the geometric figures of the base line or the bottom end of each article from plate 1 and 2, then change the geometric figure

into an isometric one. The isometric figure thus drawn will represent the bottom end of the article to be shown.

To complete any one of the pipes on plate 1, all that has to be done is to draw lines from all the points on the isometric figure of the bottom end to the required height and



Making Use of Method Learned on Changing from Geometric to Isometric



Continuation of Illustration on the Preceding Page

connect the points so located by straight lines. The isometric figure will then show the top end of the article.

In the case of the tapers on plate 2, a perpendicular line is drawn from the center of the isometric figure at the bottom end, to the required height and all corners of the bottom end are connected with this point at the top.

Financial Starvation Most Frequent Cause for Death of Trade Associations

Various methods used to finance the work of trade associations are described in a report just made public by the Trade Association Department of the Chamber of Commerce of the United States.

The report is based on information furnished by more than 300 trade associations representing many lines of industry. It emphasizes the need for a sound financial program in order to secure the most effective results in the trade association field.

During the last few years, the report points out, there has been

considerable mortality among the trade associations of the country, and one of the most fertile causes has been found to be a lack of sound financing or financial starvation. Too many attempts have been made to run a trade association on a shoe-string.

The survey conducted by the Chamber's department disclosed a great variety of methods of financing trade associations. The most generally accepted methods are: Uniform or flat rate, unit of production, volume of business, number of employees, pay roll, capital investment, and agency rating.

"It is interesting to note," the report explains, "that approximately 39 per cent of the associations reporting have adopted the volume of business method. The second method most commonly used is that of uniform or flat rate dues, which is used by 27 per cent of the organizations, while 16 per cent use the unit of production method."

A number of associations, it is shown, establish a minimum due basis regardless of the general

method used. The minimum rate ranges from \$10 to \$750.

According to the report, approximately 50 per cent of the associations reporting have an income of \$25,000 and under, whereas more than 10 per cent have an income of \$200,000 and more.

Central Alloy Steel to Improve Massillon and Canton Plants

The Central Alloy Steel Corporation has authorized an expenditure of more than \$600,000 for important improvements at both its Massillon and Canton, Ohio, plants, it is announced by Chairman F. J. Griffiths.

At Massillon the entire sheet rolling mill plant will be equipped with hack and pair furnaces and, in addition electric drive equipment will be installed.

One new continuous furnace was recently constructed with successful results and similar equipment for the remaining four mills, now to be added, is expected to increase productivity of high-grade auto body sheets at the plant by 40 per cent.

WINDOWS ^{That} SOLD

Warm Air Heating and ROOFING SERVICE

"EIGHTY-FIVE per cent of our advertising appropriation goes for window displays," said A. J. Langley, sales manager of the Badger Roofing Company, 544 State Street, Racine, Wisconsin. "That's what we think of the power of windows to attract attention." This statement was in answer to the question about whether they considered money spent on window displays of value in getting new business. This firm does a large business in sheet metal, roofing and warm air heating.

"Windows attract attention," continued Mr. Langley. "That is, they do if their appearance is of the right kind and is constantly changed and kept clean and orderly looking."

"In furnace and sheet metal sales work it is seemingly a difficult proposition to make the window attractive, and that is perhaps why so many contractors neglect

this valuable adjunct to their sales organization. It is not so difficult as it may seem, however, to create attention compelling displays if a little ingenuity is employed. Our windows are changed about every

two weeks at a cost of about \$15 per window.

"We try to make a tie-up with important holidays and news events of universal current interest. We have a particularly good location for

the making of window displays. Especially is this true of the night display. You see, none of the other surrounding buildings here are lighted at night, and when we put our vari-colored lights on the display the windows stand out in a very pronounced manner, compelling attention and arousing interest.

"Once we have called attention to our service in this manner, it is practically certain that when the home owner wants sheet metal roofing, or heating service, he is going to remember us. Even if he does not remember our firm name and goes searching through the directory for the name of some contractor, we come in

A GOOD ROOF Need Never Be Replaced



When you build your new home—top it with a roof that will last a lifetime. Satisfy yourself with the best—a roof which need never be replaced.

Let Us Furnish your Home with a Permanent Roof

If your home needs a new roof now, you'll need our services. Select from natural asphalt shingles, tar and gravel, asbestos, slate and tile, metal shingles or metal tile. We roof any size building.

Complete Engineering and Sheet Metal Service

INSURED ROOFS

"We Top 'Em All"

Badger Roofing Co.

544 State

Jackson 3938

for ours, because the moment his eye lights on our name in the directory he sees something that is familiar to him and the whole flood of our window display comes pouring back

ground is made of crepe paper. The artificial snow and the placards are very inexpensive. In this display the furnace remains in the window all of the time. We simply change

the background—renew the crepe paper, as it gets soiled and faded after a time—and then we place different objects pertaining to warm air heating in the window so as to provide a tie-up with what we are trying to sell—warm air heating, sheet metal, roofing service.

"In the roofing display shown there is nothing very difficult or expensive and yet we have created an attractive arrangement. It compels attention and at the same time puts the idea over in good shape. These roofing displays take in sheet metal and all types of roofing that we handle.

"In the third illustration is shown one of the window arrangements that was staged during the month of September. Here again we have made a very effective use of crepe paper in orange and white. It also gives an idea to the reader of how our windows are situated. The window space is nothing that is not seen every day in almost every warm air heating or sheet metal establishment. And yet what a different impression the proprietor can give prospective customers of his business methods by merely paying a little attention to these win-

into his mind. The result is that we get the call. Then, of course, after we get a chance at the customer once, it is up to us to give him the service that will hold him as a customer.

"We find that objects in motion in the window are about the best attention compellers. Motion is particularly easy to obtain in warm air heating displays because you can create air motion in various ways through the ducts. On roofing it is a little more difficult, but we have a system of lights that gives the impression of falling rain and other methods.

"The approach of any holiday, particularly the fall holidays, gives plenty of opportunity for both sheet metal and warm air heating displays. Thanksgiving, Christmas, the football season, Hallowe'en."

In two of the accompanying illustrations are shown a roofing and a warm air heating display that were used effectively last year during the Christmas holiday season.

"In the furnace display," continued Mr. Langley, "the back-



Above—Furnace Display Used with Good Results Last Christmas. Center—Exterior Appearance Window During September This Year. Below—Roofing Window Used Last Christmas

dows."

It is a fact that these windows do command attention. As proof of this assertion, the editor of AMERICAN ARTISAN was driving through Racine one day and his business took him down State Street. He had previous to this trip no knowledge that the Badger Roofing Company maintained any kind of a display window. In spite of the fact that State Street is a busy traffic lane and that any driver's attention would be largely concentrated upon

Polished Metal Going Over Big as Window Trim Material

The approach of the holiday season—Hallowe'en, Thanksgiving and particularly Christmas and New Years is the time of greatest activity among retail merchants in the designing and creating of window displays.

This year polished metal is playing a very important part in that type of window display making. In the first place polished metal takes

making backgrounds for displays that cannot fail to increase the attractiveness of the goods that are displayed.

This working of metals for window display purposes requires a great deal of cutting and bending. Now the retail store man himself is not equipped to do this. And there are undoubtedly many retail merchants in each small town that would like to avail themselves of the use of polished metals in their window display work, but who cannot afford to retain the services of such companies as the Adler-Jones. That being a case, there is a possibility that upon proper suggestion some of this type of work could be picked up by the sheet metal man. He has all the cutting, bending and forming tools necessary to do the work, as well as the mechanical and technical skill required. He would be able to work out almost any design that the window trimmer might have in mind.

The Joseph Gardner Sheet Metal Works at Indianapolis has been quite successful in meeting the demands for this type of window trim material. This firm not only works with the polished metals, but fashions much window display background material from corrugated sheets. These can be painted any color the window trimmer or designer desires.

For the sheet metal man whose shop is experiencing a slackness in business, this might be one way of getting over the rough spots. This is not the case with the Gardner Sheet Metal Works, however, because they are always busy.

Who Can Furnish Repairs for "Strand" Gas Furnace?

TO AMERICAN ARTISAN:

Please tell us where we can obtain parts for a "Strand" gas furnace formerly made by the Strand Gas Heater and Mfg. Co., Cleveland, Ohio.

Yours truly,

ADKINS ROOFING COMPANY.
Wheeling, West Virginia,
September 25, 1929.

NAME	
ADDRESS	
DATE	CALL BACK
ROOF	
GUTTERS: CLEANING, PAINTING	
HEATING	
KITCHEN VENT FAN	
METAL PAINT	
WEATHER STRIPPING	
DOOR BOTTOMS	
MINER FELT	
SAFETY . HOT	

Card Used by House-to-House Canvassers of Badger Roofing Co.

driving, the display attracted his attention. That is indeed a test of a good display. It must draw attention and give the observer quickly a line on the type of service or products to be had within the store.

Frank Bleidorn, President and proprietor of the Badger Roofing Company, and George M. Beyer, manager of the sheet metal department, also expressed themselves as heartily in favor of the window display program which the sales department puts on.

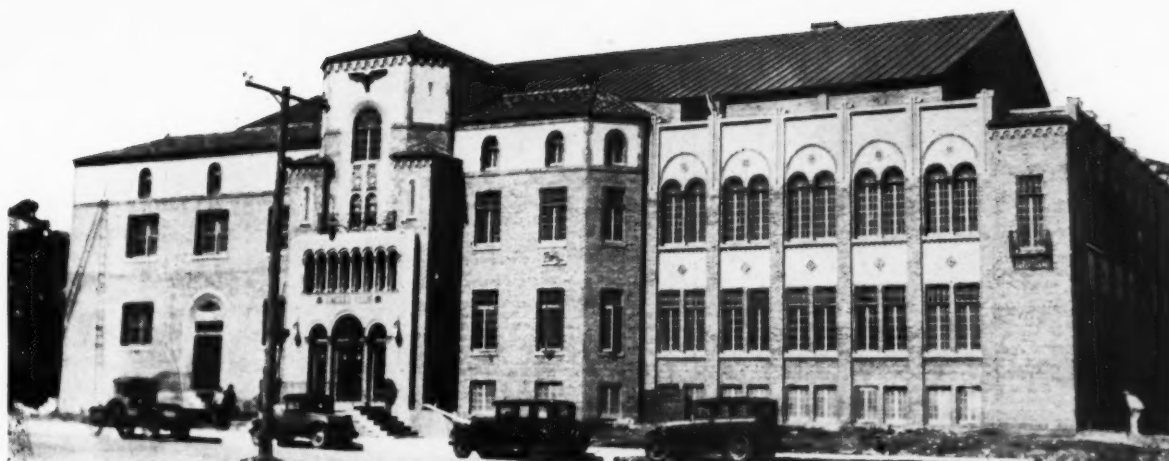
The Badger Roofing Company has a complete program of advertising. The accompanying reproduction is that of advertising copy which appeared in the Racine Review, a free circulation magazine that covers the entire city.

House-to-house canvassing is also indulged in by the company salesmen. The accompanying card is a reproduction of that which the salesman fills out at each call. Mr. Langley explained that this is more for a salesman's reminder than anything else.

the place of mirror effects and has the added advantage that it can be cut and bent and worked into any shape or design desired; whereas with glass the window trimmer is limited materially.

The Adler-Jones Company, 649 South Wells Street, Chicago, were one of the first to recognize the possibilities for display making of all kinds in the polished metals. This company has worked up quite an extensive business in metal window trimming materials for almost any background effect desired. At the present time their show rooms are filled with all manner of Christmas display material.

An entire corps of designers and artists are kept busy constantly designing novel backgrounds for windows in metal and thousands of sheets of this material is used annually in their workshops. They not only cut out all manner of animals, shapes of different kinds, trees and leaves, etc., but by a process of etching they fashion many beautiful designs on the polished metal surfaces,



New Eagles' Club House at Kenosha, Wisconsin with Batten Copper Roof.

Eagles want lasting quality — choose a Copper Roof

For Eagles' Club Building at Kenosha, Wisconsin

By George Duerr

IN metal roofing, when a particularly ornamental effect is desired, the batten or ribbed roof construction is resorted to. This method of metal construction is employed to a great extent in the old world. In America, too, it is gaining favor among architects, and sheet metal contractors in many parts of the country are coming in contact with a demand for this type of roof on public buildings and buildings where a great deal of attention is paid to the artistic exterior appearance.

In the accompanying illustrations is shown a batten or ribbed copper roof that was recently installed upon the new Eagles' Club building at Kenosha, Wisconsin, by Robert F. Boehm, sheet metal contractor at 2611 Sixty-fourth Street, Kenosha. There were some nine tons of copper used on this job, and the architects were Lindl & Schutte, Inc., of Kenosha and Milwaukee.

This roof is made of 16-ounce copper. The framework and rafters are of steel construction, topped

with concrete. The concrete then received a bath of hot tar into which was laid one-half inch Insulite boards, this latter providing the insulator.

The hip battens themselves were made of 2 by 2-inch wood, so shaped as to permit one-eighth inch space between the wooden batten and the copper roofing material. The accompanying drawing does not show exactly how the wooden batten appears, because it is drawn as a square. In reality the batten is two inches on the top and tapering down to one and three-quarters inches at the bottom, so as to allow the space for expansion and contraction of the copper.

The ridge is constructed of a 2 by 4-inch, or rather the wooden strip is two inches on top, four inches deep and one and three-quarters inches at the bottom, again allowing one-eighth of an inch on either side for the expansion and contraction of the material.

Assembly of the batten and roofing materials is shown roughly in the accompanying sketch. The copper is so bent as to cover completely the sides of the wooden batten. It is then bent again at the top part of the batten so as to permit the formation of a lock.

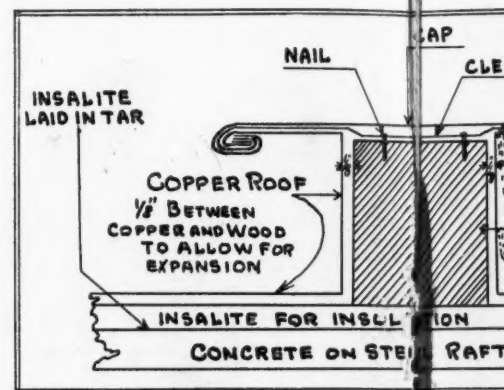
A metal cleat is then laid over the wooden batten and nailed to it as shown in the sketch. The ends of this cleat extend to the formed lock on the ends of the copper. A copper cap is then placed over the batten in such a way that it locks with the ends of the protruding roofing material, forming a water-tight lock. The whole is then bent down toward the side of the batten and the batten is complete, making a neat, securely fastened job. Students who are anxious to familiarize themselves with other types of this batten roof construction are referred to pages 97 to 101 inclusive of "Standard Practice in Sheet Metal Work."

Of course the roof described here-

Copper Roof Shows Fine Craftsmanship



SHOWING method
of Attaching
Gutters.



Illustrating Method of Creating Batten Ridge
Eagles' Club House, Kenosha

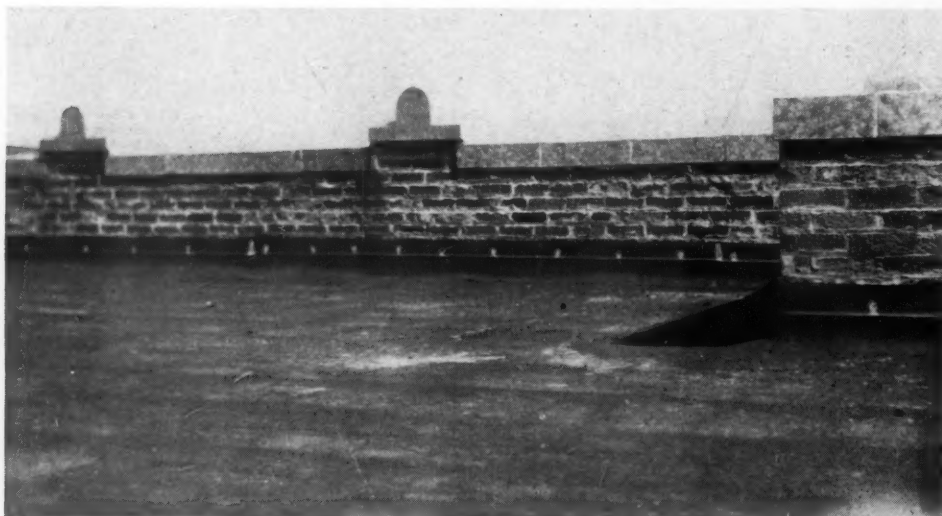
with was designed and laid before the book mentioned was released from the hands of the printer, and, therefore, all the more credit is due the architect for recognizing the merit of metal roofing for purposes to which it was employed in this case. A good deal of credit also is due the sheet metal contractor who

erected this roof for the workman-like manner in which the job was executed.

The several photographs which accompany this article show the appearance of the batten ridge construction, the batten hip construction,

the mode of attaching the gutters, which are also of copper material.

Several other features of interest on this job to the sheet metal con-

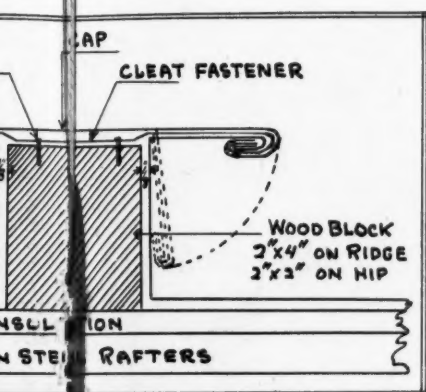


Left—Mode of Flashing Employed on Flat Portion of Roof. Center—Top of Roof Showing Ventilators Installed on N

Roof on Club Building

shows

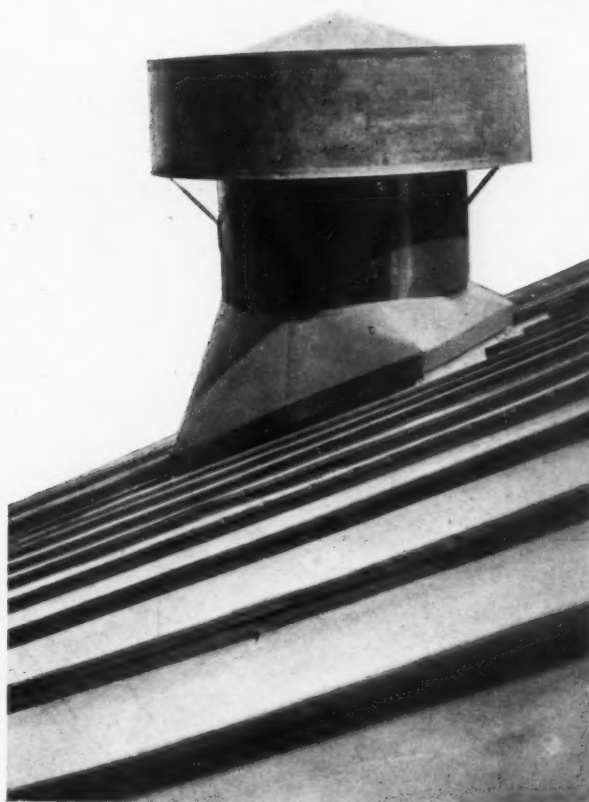
Craftsmanship



Creating Batten Roof Construction on Club House, Kenosha.

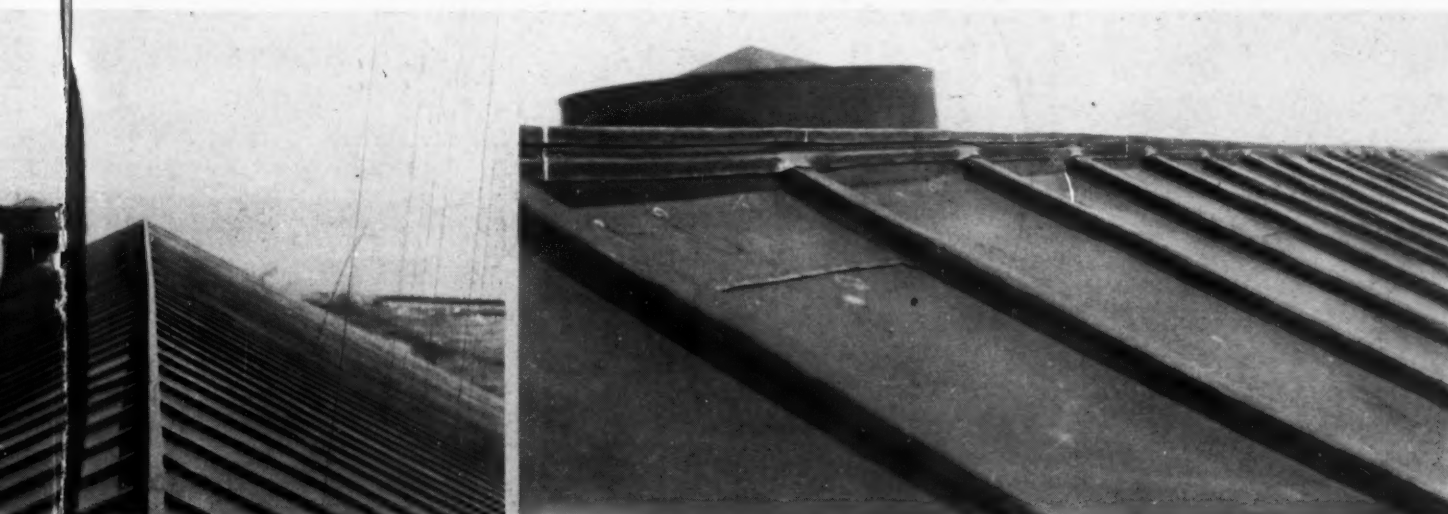
tractor are the two 48-inch ventilators erected on the north side of the copper roof. The mode of attachment employed in erecting these ventilators is shown in one of the

CLOSEUP of Giant Ventilator on North Side of Roof.



connection between the ballroom ceiling grilles and the ventilators, however, although they are installed primarily for the ventilation of the ballroom.

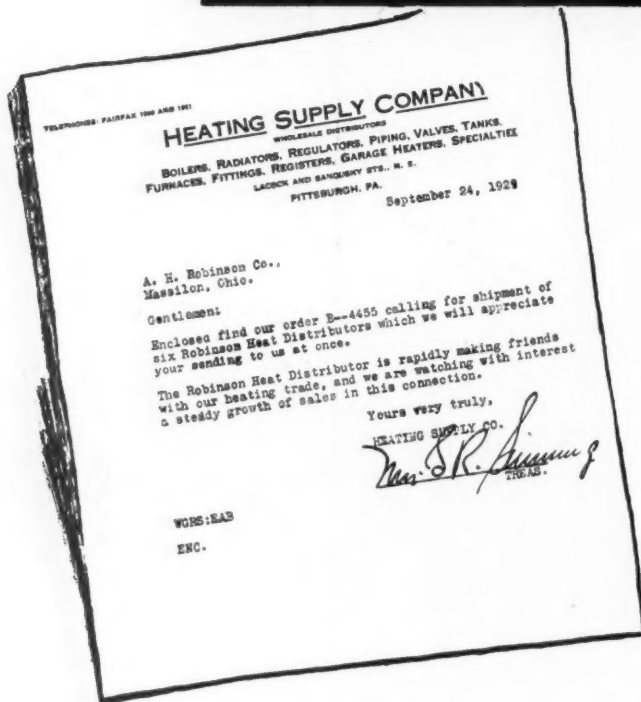
The mode of construction employed on the copper flashings is also shown. The building is quite
(Continued on Page 27)



ers Installed on North Side Over Ball Room. Right—Exterior View of Ridge and Hip Batten Construction.

What they say about the

ROBINSON Heat Distributor



THE Robinson Heat Distributor is making friends and a steady growth of sales among the dealers who buy through the Heating Supply Co. of Pittsburgh. The writer of the letter not only says so but proves it by ordering a half dozen to be sent at once.

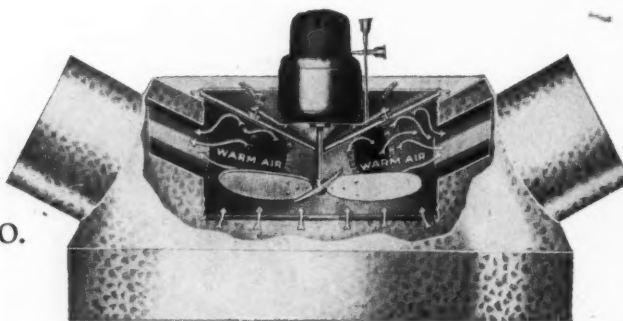
You know that Jobbers don't handle commodities that do not repeat or specialties that give them trouble. This enthusiastic letter means that the Robinson Heat Distributor is giving their dealers good profits on easy sales.

It means that the Robinson Heat Distributor is giving the dealers' customers better heating results.

Order a Robinson Heat Distributor from your Jobber (or any Jobber listed below) and see for yourself how efficient it is. Notice how easy it is to install—how interested your customers become and how easy it is to sell.

*Make extra profits this fall with
this high grade furnace fan.*

Mfg. by
THE A. H. ROBINSON CO.
Massillon, Ohio



Sold and Used
EVERYWHERE
Ask Your Jobber

WRITE TO THE FIRM NEAREST YOU FOR FULL DETAILS AND PRICES

BAKER-PAYNE-VOYE CO. Boston, Mass.
THE BECKWITH CO. Dowagiac, Mich.
BERGSTROM MFG. CO. Neenah, Wisconsin
CARR SUPPLY CO. Chicago, Ill.
DAYTON-HESSLER CO. Syracuse, N. Y.
DEMMLER BROS. CO. Pittsburgh, Pa.
DOWAGIAC STEEL FURNACE CO. Dowagiac, Mich.
FARRIS FURNACE CO. Springfield, Ill.
C. L. FEATHERSTONE FURNACE CO. Spokane, Wash.
FOLLANSBEE BROTHERS CO. Pittsburgh, Rochester, Cincinnati, Memphis, Detroit, Indianapolis, Milwaukee, Louisville.
FLORAL CITY HEATER CO. Monroe, Mich.
FOX FURNACE CO. Elyria, Ohio
HEATING & SUPPLY CO. Pittsburgh, Pa.
HENRY FURNACE & FOUNDRY CO. Cleveland, O.; Indianapolis, Ind.; Pittsburgh, Pa.

M. K. HOKE ESTATE Manheim, Pa.
HOMER FURNACE CO. Coldwater, Mich.
IDEAL FURNACE CO. Detroit, Mich.
INTERNATIONAL HEATER CO. Utica, Chicago, Cleveland, Nashua, New Hampshire, Longbranch, N. J.
KALAMAZOO STOVE CO. Kalamazoo, Mich.
KELLEY-HOW-THOMSON CO. Duluth, Minn.
KELSEY HEATING CO. Syracuse, N. Y.
W. E. LAMNECK CO. Columbus, Ohio
LENNOX FURNACE CO., Inc. Syracuse, N. Y.
LENNOX FURNACE CO. OF CANADA, Ltd. Toronto, Ontario & Winnipeg, Man.
THE MAJESTIC CO. Huntington, Ind.
MAY-FIEBEGGER CO. Newark, O.; Akron, O.
MIDLAND FURNACE CO. Columbus, Ohio
MONCRIEF FURNACE CO. Atlanta, Ga.
NEW IDEA FURNACES, LTD. Ingersoll, Ont., Can.

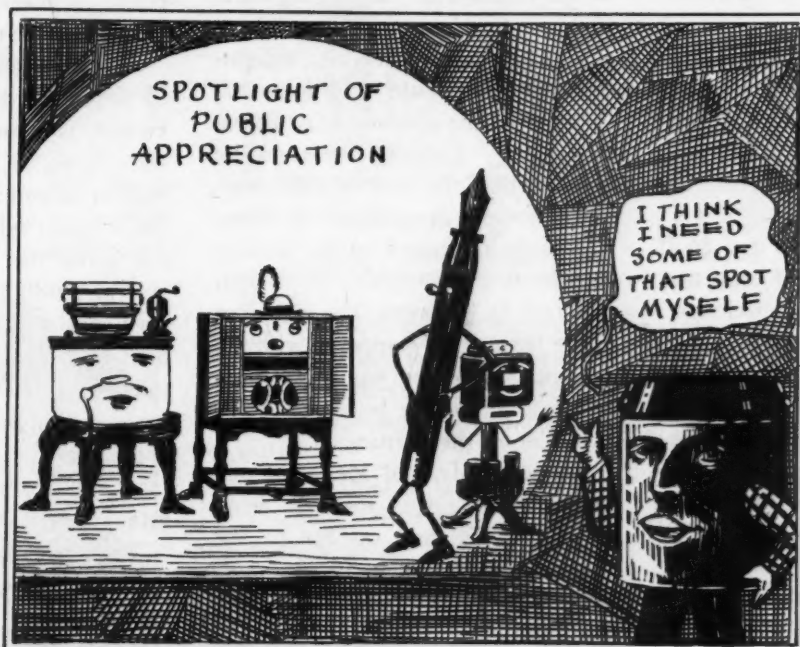
THE OHIO SHEET METAL & MFG. CO. Dayton, Ohio
J. M. & L. A. OSBOEN CO. Cleveland, O.; Buffalo, N. Y.
PEASE FOUNDRY CO., Ltd. Toronto, Ontario, Canada
PENINSULAR STOVE CO. Detroit, Mich.
PORTLAND STOVE FOUNDRY CO. Portland, Maine
RICHARDSON & BOYNTON CO. New York, Chicago, Boston, Philadelphia, Buffalo, Minneapolis, Newark, N. J.
THE SCHILL BROS. CO. Crestline, O.
SUCCESS HEATER MFG. CO. Des Moines, Iowa
WESTERN STEEL PRODUCTS CO. Duluth, Minn.
GEO. F. WHELOCK CO. Birmingham, Ala.
WISE FURNACE CO. Akron, Ohio

Say you saw it in AMERICAN ARTISAN—Thank you!

Pocket Knives

at \$7.50 Each

By Harry Clatfelter



A Little Color and Trimming Has Raised the Price of Fountain Pens from \$2.00 to \$10.00

IT'S a great age we're living in! Ten years ago (or twenty years ago, if you prefer) furnaces were just furnaces. They were put into the basement of a home and no one paid any attention to them as long as the outdoor temperature was above 70 degrees. But as soon as it grew chilly, the furnace got attention—and in return for this attention the furnace provided a comfortable temperature in that home—day in and day out—year in and year out.

A furnace in the temperate zone is in use an average of 6,500 to 7,000 hours each year—rendering a service for which there is no substitute: making homes comfortable with a live-in-able temperature. And the furnace keeps on doing it year after year after year!

Ten years ago a fountain pen was a fountain pen. A black, rubber barrel (sometimes "chased") with a gold pen that did a perfectly good job of writing—\$2.00 was a "high price" for such a pen that was in use from three hours to three hundred hours a year. And then, one day, an orange-red pen came on the market—and the black fountain pens (that were just as good to write

with) took a back seat. Later "jade green," "turquoise blue," "Mandarin yellow" and other colors joined the procession—with steadily mounting prices—until today, many of the readers of this article are carrying fountain pens that cost \$10.00—or they may have a desk set that cost \$25.00 or \$50.00. All for pens that write no better than the \$2.00 ones of 1919.

And last week I saw an advertisement of pocket knives at \$7.50 each! The knives had but one blade—plus a cork screw and a bottle opener—and a colored handle and a name! The advertisement suggested that these pocket knives be bought for Christmas gifts instead of fountain pens or cigars—and the price was \$7.50 each or \$60.00 per dozen!

And it is claimed that this knife was put on the market only after a very careful analysis that revealed

much as you would be looked upon today if you asked for a "plain black fountain pen that will write well and cost me about \$1.50 or \$2."

The point to all this is that you furnace men who "crab" because home owners dislike to pay from \$100 to \$300 for a home heating plant must convince those home owners that you give them more for what you ask than almost anyone else from whom they must buy their needs.

To the average home-owner, a furnace is still little more than a "necessary evil"—instead of one of the most important and useful sources of *luxurious comfort* he can buy at any price! He doesn't want to pay half as much for a furnace as he is willing to pay for a living-room suite that would be useless two-thirds of the year if it weren't for the furnace! He is more willing to spend \$150 for a set of shock

a "demand" for such knives at such a price! And it is entirely possible that, ten years from now, any man who attempts to buy a pocket knife as a cutting device instead of as a dress-up accessory, will find himself looked upon by the clerk

absorbers to make his car more comfortable, than he is to spend the same amount on a better furnace to make his home more comfortable with less attention and with less fuel—and he'd be in a much sadder plight without a stolen furnace than he would be without a stolen car or living-room suite!

Now, I am not recommending that you attempt to sell your furnaces because of a "jade green" or "Oriole" finish—but there are ways in which you can "sell" the property owner on the importance of a good heating plant—telling him how many pounds it weighs isn't the way!

Washing machines sell for \$150 to \$175 without the aid of color and without being sold in a "jewel case"—because thousands of women have been "sold" on what these washers will do for them *and how well they will do it*. The basic fact still remains: *The washers will only do the washing!* But the importance of the washing machine's part in the washing has been built up until hundreds of thousands have been eagerly bought at the above prices.

A furnace will only keep the house comfortable—when it would otherwise be uncomfortable two-thirds of the year—but up to now very little effort has been put forth to give that fact any real importance in the mind of the home owner! Today, more people consider the furnace something to shovel coal into, instead of the most important part of the home after the walls and roof! Yes: A furnace will only keep the house comfortable—but what would home be without comfortable warmth?

I think that if I were selling furnaces, in addition to knowing all I could about the furnace I was selling—its construction and its heating ability—and enough about other makes to inform me where the one I was selling was better—I would inform myself regarding the costs of other things that go into home construction and equipment. I would develop a "Sales talk" built around these things—and *how much more important a furnace is (and how much more service it renders)—*

than those other items that home owners are, too often, much more eager to pay the prices for.

Especially if I were selling one of the better makes of furnaces would I do this—because in "stepping up" my prospects' valuation of the importance of the heating plant he was about to buy. I would also be stepping up his good opinion of the particular one I am selling—and the price that I am asking would not appear as "high" after his "enlightenment" as it would if he were still thinking of the furnace as a "necessary evil." I would try to make him see that the *year-in and year-out luxurious comfort of his home is entirely dependent on his furnace two-thirds of the year*. And with this fact in his mind, his valuation of the furnace, as compared with the valuation of other equipment and possessions, would be much more favorable to the furnace.

And with Mr. and Mrs. America paying \$5.00 and up for trick cigar lighters; \$7.50 and up for pocket knives; \$10.00 and up for fountain pens; \$150.00 and up for washing machines (and radios); \$500 and up for attachments for furnaces (is any oil burner more than an "attachment" to the heating plant?) and \$1,000 and up for automobiles, Mr. and Mrs. America will willingly pay a satisfactory price for a furnace when they begin buying luxurious home comfort year in and year out instead of "a furnace"!

Furnace Installer Finds City Building Permit Record Prolific Source of Leads

Warm air furnace installers who do not follow the building permits issued daily on residence construction in their own cities and those of surrounding towns are neglecting one of the most valuable sales leads they can possibly get.

One furnace installer selling between 450 and 500 furnaces annually in a city of 90,000 population states that practically all of his new house installation work originates from the following up of leads secured by him by a daily visit to the building department of city hall. His first stop on the way down to

his office every morning is the city hall.

Armed with the names and addresses of folks who have taken out permits to build, this contractor spends the major portion of the remaining day calling on these people. The percentage of the total number of people he calls on who buy is very high indeed, which can be readily appreciated when his yearly sales records are viewed.

The chief advantage of this type of selling is that every man interviewed is actually a prospect for some type of heating system. A further advantage is found in that the prospect called upon has perhaps not given the matter of a heating system anything but the most cursory consideration. Hence the salesman finds him in a state of open-mindedness. Could anything be more desirable from the salesman's angle than a prospect with an actual need for a heating system and little consideration given to it?

This particular furnace dealer says that he seldom ever calls on a prospect more than three times. Generally he sells on the first trip, and succeeding trips are more for ironing out minor details than overcoming any real sales resistance.

It Won't Be Long With This Type of Publicity for the Industry

The warm air heating industry is now getting the right kind of publicity from the daily newspapers. The following question and answer appeared in the Builders' Section of the Chicago Daily News, Saturday, September 28. It was answered by the Architect's Small House Service Bureau of the U. S., Inc.:

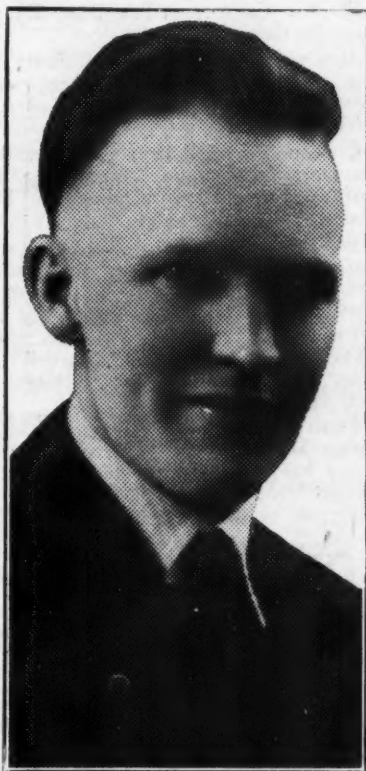
Question—We would like your advice as to whether a pipeless furnace will heat a six-room house thoroughly or if it is necessary to install a hot water system. There is a very great difference in cost and we must cut expenses.

Answer—We recommend that you install a piped furnace job. A pipeless furnace is all right as far as it goes and does very well in a small house but where you have six

rooms and a bath it is better to pipe the heat to each room. Have the plan laid out by a competent warm air heating engineer. Have the furnace set in accordance with the plan approved by the National Warm Air Heating and Ventilating Association. You pay a little more for a job of this kind at first, but you come out ahead very shortly.

Claire Baugh Dies From Wounds Received in Accident

The funeral of Claire Baugh, brother of L. Max Baugh of the Meyer Furnace Company, was held in Chicago this week. Mr. Baugh was severely injured in an accident which befell him while working on



Claire Baugh

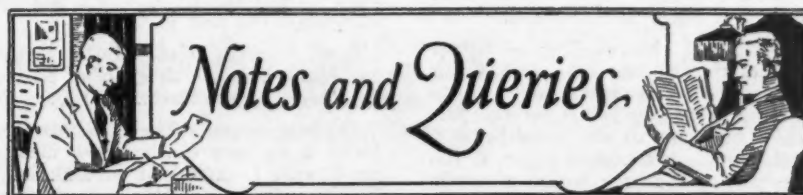
an apartment building in Chicago. He hovered near life and death for several days, but finally died September 25.

He was born at Ansley, Nebraska, in 1892, and moved with his parents at an early age to Cambridge, Illinois, where his father engaged in the sheet metal business. He learned the trade under the able tutelage of his father. He had followed the sheet metal and warm air heating trade from the time that he left school and was very enthusiastic

about the Code Method of installation. At the time of the accident Mr. Baugh was employed by Geo. A. Cella. Prior to that he had been in the employ of A. F. Fahrnsworth of Chicago and R. H. Martin of Aurora, Illinois.

Those who survive him are his father, George M. Baugh, of Cambridge, who has been a sheet metal

man for almost 60 years; his wife, three brothers, Max of Galva, Clell of Cambridge and Ben of Davenport, Iowa, and five sisters, Mrs. Fern Hinrichs of Chicago, Miss Pearl Baugh of Oakland, Nebraska, Mrs. Patience Wright of Cambridge, Mrs. Marjorie Radcliff of Peoria, and Mrs. Ottalie Matheny of Kewanee.



Furnace Brushes

From Chicago Furnace Supply Company, 1276 Clybourne Avenue, Chicago, Illinois.

Can you tell us who makes fiber furnace brushes with long handles?

Ans.—Schaefer Brush Mfg. Co., 395 Reed Street, Milwaukee, Wisconsin.

Furnace Cleaner Made by Sheet Metal Man

From a Subscriber.

I will appreciate it if you will give me the name and address of the sheet metal contractor who made a furnace cleaner that was featured in AMERICAN ARTISAN some time ago.

Ans.—John Hull, Abilene Sheet Metal Works, Abilene, Kansas. This item appeared in the June 2, 1928, issue.

Eaves Trough of Heavy Lead Coated Sheets

From E. H. Ward and Company, 1100 Cowles Street, Lansing, Michigan.

Can you tell us who makes eaves trough of heavy lead coated sheets, 16 gauge?

Ans.—Barnes Metal Products Company, 4425 West 16th Street, Chicago, Illinois.

Stove and Furnace Repairs

From F. H. Caldwell, 2515 Gilboa Avenue, Zion, Illinois.

Please give me the names of firms who can furnish stove and furnace repairs, besides the Northwestern Stove Repair Company.

Ans.—The Speich Company, 13 West Water Street, and Stove Dealers Supply Company, 310 Chestnut Street, both of Milwaukee, Wisconsin; A. G. Brauer Supply Company,

316 North 3rd Street, St. Louis, Missouri; Des Moines Stove Repair Co., Des Moines, Iowa; Metzner Stove Repair Company, 515 Wyandotte, Kansas City, Missouri; Niehaus Furnace Repair Company, Cincinnati, Ohio.

Cast Pipe for Inside Downspout

From The City Tin Shop, Centralia, Illinois.

Please tell me who makes 4"x12" pipe, cast elbow and a cast roof box. I want this material for use in making an inside downspout.

Ans.—James B. Clow and Company, North Talman Avenue and Lake Street, Chicago, Illinois.

Manometer

From F. E. Grunwaldt, 164 Gales, Seattle, Washington.

I should like to know who makes an instrument which is used to test the air currents as they leave the fan as to the amount of air delivered.

Ans.—This is known as a pitot tube and multiplying manometer gauge, and is made by E. Vernon Hill Company, 64 West Randolph Street, and Ellison Draft Gauge Company, 214 West Kinzie Street, both of Chicago.

Block Letters

From Pullen Roofing Company, 2607 Grant Street, Wichita Falls, Texas.

Who makes block letters three feet and smaller?

Ans.—Friedley-Voshardt Company, 733 South Halsted Street, and George Steere, 434 South Dearborn Street, both of Chicago, and Dickey-Grabler Company, 10310 Michigan Avenue, Cleveland, Ohio.

WHO'S WHO, WHERE!

CAMDEN, N. J.—The Penn Jersey Metal Products Corp., Newton Avenue and Line Street, which was recently incorporated for \$125,000, is now operating a plant doing general machine work of jobbing character and manufacturing tools, dies and metal stampings.

PORTLAND, ORE.—Ben Morris and J. J. Schott have engaged in business at 837 Union Avenue, N., under the name of Ben Morris Sheet Metal Works.

MINNEAPOLIS, MINN.—The oil burner manufacturing business of Cary & Co. is to be moved to Waupaca, Wis., where the company has an option for the purchase of the plant of the Acme Brass & Metal Works, and expects to be in full production in Waupaca within a month.

BOONE, IA.—The Hansen Plumbing Co. has the contract for the sheet metal work on Texaco filling station.

MASON CITY, IA.—Ray E. Pauley Co. has been awarded the sheet metal contract for the school building in Elma, Ia.

DAVENPORT, IA.—The Davenport Metal Specialty Co., 1232 West 5th street, has been awarded the furnace heating contract for residence of R. W. McLain.

Jens Nielson, 807 W. 4th street, has the warm air heating contract for residence of Geo. Heuer.

WATERLOO, IA.—The L. E. Glaze Furnace & Sheet Metal Construction Co., 811 Commercial street, has been awarded the heating contract for residence of W. I. Smucker, and also for residence of Guy V. Bellinger.

The Stegman & Trainer Sheet Metal & Furnace Co., 710 Jefferson street, has been awarded the furnace contract for residence of Edwin Rugg.

The Waterloo Metal & Manufacturing Co., Miles & Commercial sts., has been awarded the sheet metal work contract, and Quest & Smith, 411 W. 5th street, the furnace contract, for residence of Myron C. Buck.

LOS ANGELES, CAL.—The Ace Sheet Metal Works has been awarded the sheet metal work on the laboratory building of the Fox Film Corp.

The Main Cornice Works has been awarded the sheet metal work contract for Linwood grammar school, at the Century Square School.

The Pioneer Metal Trim Co., 4312 Beverly boulevard, has been formed by W. W. Hartman and J. Donner.

PASADENA, CAL.—The Payne Furnace & Supply Co. has been awarded the furnace heating contract for residence of Charles N. Wheeler.

The Pasadena Sheet Metal Works, 57 West Union avenue, has the warm air heating contract for residence of J. J. McCarthy.

FRESNO, CAL.—A 100x100 ft. factory building, to cost about \$25,000, is to be built at once on the corner of H and Calaveras streets, for occupancy of the Fresno Body & Fender Works.

Henry Birline & Sons, 615 Hazel Avenue, Danville, Illinois, has a very novel window display. During the summer months he places a large glass tank filled with water in one of his windows.

Myriads of sprightly gold fish flit to and fro in the water and attract the attention of passers-by. Mr. Birline spends his winters in Florida where has a large pecan farm, but during his absence his sheet metal and heating business receives excellent attention from his two sons, Leo and Robert.

DETROIT, MICH.—The Detroit Oil Burner, 746 Meldrum Avenue, has been incorporated with an authorized capital stock of \$15,000, all of which has been subscribed and paid in.

PORT ANGELES, CAL.—G. D. Haugen has engaged in the sheet metal business at 224 N. Laurel Street.

SEATTLE, WASH.—The Columbia Sheet Metal & Furnace Co. has been incorporated with a capital of \$15,000, by L. E. Thompson, George Malmgren and Mark Wyman.

PORTLAND, ORE.—The Live Air Heat Corporation has been chartered with a capital of \$200,000, by R. W. Hall, W. A. Hall and W. F. Meyer.

The Everhot Heater Sales Co., Inc., has been chartered, with a capital of \$4,000, by H. B. Scutt, Alfred P. Kelley and Alice E. Brown.

McDonald & Wettle, 485½ Hawthorne, have the sheet metal and roofing contract for warehouse of Jantzen Knitting Mills Co.

HOQUIAM, WASH.—Pryde Brothers Sheet Metal Works has been incorporated, with a capital of \$25,000, by H. J. Pryde and D. E. Pryde.

MARQUETTE, MICH.—The Roofing & Sheet Metal Shop has been opened by Frank W. Kramer, who has been in the employ of H. H. Pellow at this point for the past three years.

MINNEAPOLIS, MINN.—The W. S. Nott Co., 201 N. 3rd St., have the roofing and sheet metal contract for warehouse of the Northwestern Terminal Co.

WATERLOO, IOWA.—The Stegman & Trainer Sheet Metal & Furnace Co., 710 Jefferson St., have the furnace contract, and the Cutler Hardware Wholesale Co., 400-404 Sycamore St., the sheet metal work contract for addition to Burton Avenue Church.

The Bennett Furnace Co., 309 W. 4th St., has the warm air heating contract, and the Watkins Coal & Lumber Co. the sheet metal contract for Frank E. Watkins apartment building.

The Waterloo Metal & Manufacturing Co., Commercial and Mile Sts., has the warm air heating contract, and the Nauman Co., Park Ave. and Cedar St., the sheet metal and roofing contract for residence of Kirk V. Gross.

SAN FRANCISCO, CAL.—Latourette-Fical Co., 907 Front St., has the sheet metal contract for library and auditorium building in Sacramento, Cal.

The Forderer Cornice Works, 269 Potrero Ave., have been awarded the metal window and fire door contract for the warehouse of American Can Co.

The Forderer Cornice Works, 269 Portero Ave., has been awarded the exterior metal sash contract for Shell Oil Co. office building.

FRESNO, CAL.—The Sheet Metal Workers have returned to work on a compro-

mise agreement, whereby the scale is \$10 per day for a five-day week, and the shops can increase the apprentice proportion to one apprentice for each two men.

SAN JOSE, CAL.—H. J. Pasco has the sheet metal work contract for the Chas. Rosenhahn apartment building.

SACRAMENTO, CAL.—Arthur Crouch, 2723 W. — St., has received the sheet metal work contract for the Crocker School building.

LOS ANGELES, CAL.—The Davidson Sheet Metal Works has been awarded the sheet metal contract for the Frank L. Peterson apartment building.

Emil Brown & Co., 300 E. 9th St., have been awarded the sheet metal work on loft building, 12th and Maple Sts.

A. W. Gutridge has been awarded the sheet metal contract for factory building of Los Angeles Engine Works.

The National Cornice Works has been awarded the contract for metal equipment for California Telephone Equipment building.

McCluney Brothers, 1023½ Santa Fe Ave. have been awarded the sheet metal contract for factory building of Los Angeles Brush Co.

Carlson & Powell have been awarded the sheet metal contract for Marine Securities Corporation building in San Pedro, Cal.

SANTA BARBARA, CAL.—The Ott Hardware Co. has been awarded the heating and sheet metal contract for the Ray L. Skofield residence in that city.

PASADENA, CAL.—The Pasadena Sheet Metal Works has been awarded the sheet metal contract for Herbert E. Bell building.

LONG BEACH, CAL.—The McClosky Sheet Metal Works, 1191 W. Ocean Ave., has the ventilating contract for Longfellow grammar school.

THE FURNAS BIZNES

By a Arkansaw Koon Hunter

I sold a furnis outen the carlude and i got 75 dollus. i dont hafta pay fur the furnis now so I bot a new gun the wether is coler and I will go Koon huntin rite sune and see ef the gun is no good. Hoping you are the same,

Bill Bestever

G. H. Charls Speaks Before National Industrial Advertisers

G. H. Charls, president, National Association of Flat Rolled Steel Manufacturers, Cleveland, spoke on "Building the Family Spirit in Industry" at the opening of a three-day convention and exhibit, September 30, of the National Industrial Advertisers' Association.

EAGLES' CLUB*(Concluded from Page 21)*

a sizable one, as can be seen from one of the accompanying illustrations, and is equipped with a complete ventilating system as well. The fact that it is located in the heart of the manufacturing district on the lake front of Kenosha, where smoke fumes and moisture are excessive, is going to make it an interesting experiment to watch from the standpoint of longevity of service to the owners. Mr. Boehm is of the opinion that this roof will last as long as the structure itself stands, and longer.

This is one of the many interesting metal jobs that are making their appearance in different parts of this country since the advent of the educational promotion work was started on the correct usage of copper, zinc, and steel by the three organizations that are sponsoring these metals.

The Copper & Brass Research Association, the Sheet Steel Trade Extension Committee, and the American Zinc Institute have done a splendid work in promoting a more intelligent use of these three metals. And their work is now further augmented by that of the Trade Development Committee of the National Association of Sheet Metal Contractors in the production of the book mentioned previously in this article.

Sheet metal contractors already are experiencing a marked increase in the demand for the metals for purposes entirely unheard of a few years ago. Particularly is this true of copper. The copper people are most assuredly cashing in on the good work they have done in educational promotion work and advertising.

It is urgently hoped that sheet metal contractors themselves will not make the mistake of applying the metals with which they work incorrectly or of employing them in places not suited to their use. There is at the present time information

available on the correct use of each and every one of the metals with which the contractor works, so that there is no possible excuse for misapplication of them.

It is also hoped that sheet metal contractors themselves will make use of this and similar articles that appear on these pages from time to time to show building owners and architects what is being done in the

T HIS job is a particularly attractive one and must give the sheet metal contractor, Robert F. Boehm, Kenosha, considerable satisfaction.

The architects, Lindl & Schutte, Inc., 429 Broadway, Milwaukee, Wisconsin, are also very well pleased with the result obtained.

Mr. Lindl's comment on the job and on the work and the products of the sheet metal industry in general are also given herewith.

It is the very thing of which Mr. Lindl speaks that the industry is making such a strenuous effort to combat, and every sheet metal contractor should appoint himself a committee of one to bring about better conditions.

way of building for beauty and permanence with sheet metal. It will pay you to do this, as it lessens sales resistance and goes a long way toward making the public sheet metal conscious.

Joseph Lindl of Lindl & Schutte, Inc., architects, 429 Broadway, Milwaukee, Wisconsin, designers of the Eagles' Club House at Kenosha, makes the following statement concerning the job:

"The reason for using the copper roof over the entire ball-room enclosure was influenced by the fact that experience teaches that a copper roof of the proper gauge and made with standing seams of the proper kind, which allows free expansion and contraction of each individual sheet, makes a very permanent roof and one that is also very good looking after being properly weathered.

"We feel that a roof of this type is strictly an investment and not a luxury, taking into account the number of years that it will give service without attention of any kind.

"About the ability of sheet metal contractors to improve the sheet

metal industry generally, I feel from experience that while a good many sheet metal contractors are up to the standard in every respect, that a great deal of the fault of dull periods in the sheet metal industry is due to inferior materials turned out by the manufacturers. A typical instance of this is found in my own home, where eighteen (18) years ago I used 26-gauge galvanized iron for the gutters and downspouts. Today the same downspouts are doing good service and show no apparent signs of wear, internally or externally, which speaks well for that type of metal.

"Today we find that where we specify 26-gauge galvanized that within five or six years, unless attention is constantly given by painting, the chances are ten to one that there isn't even a streak of rust left for the owner to look at. These instances should become less and less as the newer and better metal gets into use."

How One Store Speeds Up Collections

An eastern merchant sends unsigned checks to all his customers with overdue accounts. They are drawn on the customer's own bank and made out in favor of the store. The checks are inclosed in envelopes without any explanation. Result: Some customers sign the checks and return them, while others come in and pay the account themselves. The beautiful part of it all is that they do not take offense.

An Ohio store pays the postage on remittances of its charge customers. This it does by enclosing with its monthly statements the well-known business reply envelope. Credit men are not agreed that a store should assume the expense of guaranteeing return postage, but this store believes that the results justify the expense, and they always enclose a business envelope for the customer's convenience.

COBWEBS

(Concluded from Page 13)

nition for them to use in coöperating with the dealer.

This is not a blanket indictment of all warm air furnace salesmen. There are some of these gentlemen in the industry who are giving intelligent support to their salesmen in the field; who are turning their primary attention to thinking up ways and means of helping the installer move into the basements of ultimate consumers the furnaces he buys. They are not only doing this directly, but indirectly they are effectively breaking down sales resistance for the installer and consequently for their own salesmen. In other words, they are employing sensible methods in securing the volume their superiors desire.

These men have a big job before them, and there are only a few of them who fully realize the enormity of the task. But thanks be given that these few also appreciate fully that via this route lies the only salvation of the warm air heating industry. They deserve all the credit they do not get for their sympathetic understanding of the problems of their own men in the field and the furnace installers themselves.

But before the industry can do a reverse and come into a general enjoyment of popularity by the public, all the salesmen who are now soldiering on the job have got to get into the habit of applying intelligence to their jobs.

Generally speaking, supposedly the reason why a man is given a job of salesman is that he is thought to have greater ingenuity in producing business than any of the salesmen on the force. And yet hundreds of warm air heating salesmen travel from town to town and city to city doing everything they can possibly think of to help the installer sell more products, and all this without one bit of practical help from the superior who is supposedly directing the sales campaign from the home office.

Some time ago the salesmen and the warm air furnace installers came

in for a big bunch of panning because of their alleged laziness and general laxity. It would seem that it is about time some of the salesmen in the industry had pointed out to them ways in which they have been neglecting their own duties and opportunities.

There is a revolution going on in merchandising methods, but it is far from having run its course insofar as the warm air heating industry is concerned, which is evidenced by the contents of a warm air heating advertisement that appeared in the Saturday Evening Post of September 21st. Such practices are an insult to public intelligence and are sure to be resented by the public.

Armco Girls Go in and Become Champions at First Aid Work

Two championship and a third place in their own plant meet is the record of the first girls' first-aid trained team of the American Rolling Mill Company which was organized for competition in 1929, by ARMCO girls at the Nellis West Virginia mines of the company.

Competing against the six men's teams of their own plant on Saturday, August 3rd, the girls tied for third place with 296 points out of a total of 300.

At the Coal river district meet of West Virginia on Labor Day they won the Girls' State Championship with 794 points out of an 800 total.

As a climax to their season they copped the state championship of West Virginia for girls by making 796 of a possible 800 points. The four points lost in this big meet of the year was no reflection on their sterling work, for they were lost as result of overtime on the problems. The work of the girls was evidently almost perfect otherwise.

The members of the team were: Lydia Easter, Captain; Lella Stewart; June Keenan; Evelene Shaw; Ruby Barker; Nina Holmes, patient; and Katie Bias, substitute.

The men of East Works of the Middletown Division of The American Rolling Mill established what is believed to be world's safety record

for large steel plant up to 5:15 on morning September 11th, going forty-seven days and 1,241,823 consecutive manhours without lost time because of an accident.



Metal Branch meeting of the National Hardware Association, Atlantic City, New Jersey, Tuesday, October 22, 1929.

American Hardware Manufacturers' Association Convention, Atlantic City, New Jersey, October 21, 22, 23 and 24, 1929. Hotel headquarters, Marlborough-Blenheim. Charles F. Rockwell, Secretary, 342 Madison Ave., New York City.

National Hardware Association of the United States Convention, Atlantic City, New Jersey, October 21, 22, 23 and 24, 1929. Hotel headquarters, Marlborough-Blenheim. George A. Fernley, Secretary-Treasurer, 505 Arch St., Philadelphia, Pennsylvania.

National Warm Air Heating Association, Columbus, Ohio, December 3 and 4, 1929. Allen Williams, 174 East Long Avenue, Columbus, Managing Director.

Kentucky Hardware and Implement Association Convention, Brown Hotel, Louisville, January 14, 15, 16 and 17, 1930. J. M. Stone, Secretary, 200 Republic Building, Louisville.

Texas Hardware and Implement Association Convention and Exhibition, Houston, January 21, 22 and 23, 1930.

American Society of Heating & Ventilating Engineers and International Heating and Ventilating Exposition, Philadelphia, January 27 to 31, 1930. A. V. Hutchison, 29 West 39th Street, New York, Secretary.

Missouri Retail Hardware Association Convention and Exhibition, New Hotel Jefferson, St. Louis, January 28, 29 and 30, 1930. F. X. Zecherer, Secretary, 5106 North Broadway, St. Louis.

Indiana Retail Hardware Association Convention, Manufacturers' Building, Indiana State Fair grounds, Indianapolis, January 28, 29, 30 and 31, 1930. G. F. Sheely, Secretary, 911-913 Meyer Kiser Bank Building, Indianapolis.

Wisconsin Retail Hardware Association Convention and Exhibition, Auditorium, Milwaukee, February 4, 5, 6 and 7, 1930. B. Christianson, Secretary, Stevens Point. G. W. Kornely, Exhibit Manager, 1476 Green Bay Ave., Milwaukee.

Ohio Hardware Association Convention and Exhibition, Columbus, Ohio, February 4, 5, 6 and 7, 1930. James B. Carson, Secretary, 315 Mutual Home Building, Dayton.

Illinois Retail Hardware Association Convention and Exhibition, Hotel Sherman, Chicago, February 11, 12 and 13, 1930. Paul M. Mulliken, Managing Director, Elgin.

Iowa Retail Hardware Association Convention and Exhibition, Hotel Savary and Des Moines Coliseum, Des Moines, February 11, 12, 13 and 14, 1930. A. R. Sale, Secretary, Mason City.

RANDOM NOTES AND SKETCHES

The Modern Girl

"You are the most beautiful girl I've ever seen! I long to hold you in my arms, to caress you, to kiss your eyes, your hair, your lips—to whisper in your ear, 'I love you!'"

"Well, I guess it can be arranged."

* * *

The captain of a small trading vessel wanted to land some contraband at a certain port. Approaching the customs officer, he said: "Joe, if I put a ten-shilling note over each eye, could ye see?"

"I could not," said Joe. "And if I had one in me mouth I couldn't speak."

* * *

They Wern't Thinking of the Same Thing

Policeman: "As soon as I saw you come around the bend I said to myself, 'Forty-five at least.'"

Lady Driver (Miss Virginia Hutchison, Louisville): "How dare you! It's this hat that makes me look so old." (No offense.)

* * *

Mrs. Goldman had engaged a new maid. She was a thoroughly good girl, truthful, honest, very willing and obliging, but she lacked tact.

One evening, when her mistress was going to the theater, the maid noticed that a favorite rope of pearls was missing.

"Oh, madam," she cried, "where are your lovely pearls tonight?"

"I'm not wearing them, Winnie," replied Mrs. Goldman. "I don't fancy them tonight."

"Oh, what a pity, ma'am!" exclaimed the maid. "An' they made you look so like a real lady!"

* * *

"Have you ever seen the prisoner at the bar?" asked the judge of the star witness in a St. Louis police court case.

"No, I have not, your Honor,"

BY
SIDNEY ARNOLD



the witness answered, "but I've seen him when his actions made me think that's where he'd been."

* * *

The cashier of a small movie house is selling tickets as a pal looks on.

A customer buys a quarter ticket, lays down a half-dollar and walks away, leaving his change.

"Does that often happen?" asks the cashier's friend.

"Very often," replies the ticket seller.

"What do you do in a case like that?"

"Oh," says the man in the wicket, "I always rap on the window with a sponge."

* * *

An Impossibility

"I know an artist that painted a cobweb so real that a maid spent an hour trying to get it down."

"Sorry, but I don't believe you."

"Why not? Artists have been known to do such things."

"Yes, but not maids."

* * *

Voice from above—"May!"

Voice from below (presently)—
"Yes, mother."

Voice from above—"The clock has struck twelve three times now. Let it practice on one for a while."



Mother: "What made you stay so late? Have a flat tire?"

Daughter, dreamily: "No, mother, I'd hardly call him that!"

* * *

A certain salesman was proposing to his best girl.

"And, sweetheart," he finished, "I'll lay my whole fortune at your feet."

"It isn't a very big fortune," she reminded him.

"I know, dear," he replied, "but it'll look awfully big beside your little feet!"

He got the job!

* * *

Frank Confession

"How do you like the women's dresses nowadays?"

"Fine—they suit me right up from the ground."

* * *

The lawyer had returned home after an important case in which he had been defending a man charged with murder.

"He was acquitted," beamed the lawyer.

"Wonderful. On what grounds?"

"Insanity. I proved that his father had spent five years in a lunatic asylum."

"But he hadn't, had he?"

"Yes," said the lawyer, "he was a doctor there, but I saw no need to bring that fact out."

* * *

I had the pleasure on Friday of this week of making the acquaintance of Ferdinand Masnik, Czechoslovakia, Europe, who came to America some few weeks ago to make a study of the warm air heating industry. Mr. Masnik was very enthusiastic about the Standard Code and the research work at the University of Illinois, and says he will return to America in a short time to spend a year.

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

Note: These Prices Are Chicago Warehouse Prices of Metal, to Which Must Be Added Freight to Cities Outside of Chicago.

METALS

PIG IRON

Chicago Fdy.,	
No. 2	\$20 00
Southern Fdy. No. 2	21 51
Lake Superior Charcoal	27 04
Malleable	30 00

FIRST QUALITY BRIGHT CHARCOAL TIN PLATES	
IC 20x28 112 sheets	\$23 50
IX 20x28 112 sheets	25 50
IXX 20x28 56 sheets	14 50
IXXX 20x28 112 sheets	15 50
IXXXX 20x28 112 sheets	17 00

TERNE PLATES

	Per Box
IC 20x28, 40-lb. 112 sheets	\$28 70
IX 20x28, 40-lb. 112 sheets	29 70
IC 20x28, 25-lb. 112 sheets	33 20
IX 20x28, 25-lb. 112 sheets	35 20
IC 20x28, 20-lb. 112 sheets	30 25
IV 20x28, 20-lb. 112 sheets	33 00

"ARMCO" INGOT IRON PLATES	
No. 8 ga.—100 lbs.	\$4 15
3/16 in.—100 lbs.	4 05
1/2 in.—100 lbs.	3 85

COKE PLATES

Cokes, 80 lbs., base, 20x28	\$12 00
Cokes, 90 lbs., base, 20x28	12 20
Cokes, 100 lbs., base, 20x28	12 40
Cokes, 107 lbs., base, IC	
20x28	12 75
Cokes, 135 lbs., base, IX	
20x28	14 75
Cokes, 155 lbs., base, 2X,	
56 sheets	8 50
Cokes, 175 lbs., base 3X,	
56 sheets	9 35
Cokes, 195 lbs., base 4X,	
56 sheets	10 25

BLUE ANNEALED SHEETS	
Base 10 ga.—per 100 lbs.	\$3 35
"Armco" 10 ga.—per 100 lbs.	4 15

ONE PASS COLD ROLLED BLACK

No. 18-20	per 100 lbs. \$3 85
No. 22	per 100 lbs. 4 00
No. 24	per 100 lbs. 4 05
No. 26	per 100 lbs. 4 15
No. 27	per 100 lbs. 4 20
No. 28	per 100 lbs. 4 30
No. 29	per 100 lbs. 4 45
No. 30	per 100 lbs. 4 55

"ARMCO" GALVANIZED

"Armco" 24	per 100 lbs. \$6 15
GALVANIZED	
No. 16	per 100 lbs. \$4 40
No. 18	per 100 lbs. 4 55
No. 20	per 100 lbs. 4 70
No. 22	per 100 lbs. 4 75
No. 24	per 100 lbs. 4 90
No. 26	per 100 lbs. 5 15
No. 27	per 100 lbs. 5 25
No. 28	per 100 lbs. 5 40
No. 30	per 100 lbs. 5 50

BAR SOLDER

Warranted 50-50	per 100 lbs. \$31 25
48-52	per 100 lbs. 30 51
45-55	per 100 lbs. 29 25
Plumbers'	per 100 lbs. 27 25

ZINC

In Slabs	\$ 7 35
SHEET ZINC	
Cask Lots (600 lbs.)	\$11 75
Sheet Lots	12 75

BRASS

Sheets, Chicago base	24 1/2 c
Mill base	23 1/2 c
Tubing, brazed, Chicago base	31 1/2 c
Mill base	30 1/2 c
Tubing, seamless, Chicago base	29 1/2 c
Mill base	28 1/2 c
Wire, Chicago base	24 1/2 c
Mill base	23 1/2 c
Rods, Chicago base	22 1/2 c
Mill base	21 1/2 c

COPPER

Sheets, Chicago base	27 1/2 c
Mill base	26 1/2 c
Tubing, seamless, Chicago base	30 1/2 c
Mill base	29 1/2 c
Wire, plain rd., 3 B. & S. Go.	
and heavier	25 1/2 c

LEAD

American Pig	\$7 60
Bar	8 60

TIN

Bar Tin	per 100 lbs. \$53 00
Pig Tin	per 100 lbs. 52 00

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ASBESTOS

Paper up to 1/166c per lb.
Roll board7 1/2 c per lb.
Mill board 3/32 to 1/2	7 1/2 c per lb.
Corrugated Paper (250 sq. ft. to roll)\$6 00 per roll

BRUSHES

Furnace Pipe Cleaning	
Bristle with handle each	\$0 75
Flue Cleaning	
Steel only, each	1 25

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 45
American Seal, 10-lb. cans, net	85
American Seal, 25-lb. cans, net	2 25
Pecora	per 100 lbs. 7 50

CHIMNEY TOPS

Adams' Revolving	Wt. Doz.	Price Doz.
4 in.	31 lbs.	\$11 00
6 in.	34 lbs.	11 50
7 in.	38 lbs.	13 50
8 in.	33 lbs.	15 00
9 in.	51 lbs.	16 50
10 in.	56 lbs.	18 00
12 in.	66 lbs.	22 00
14 in.	110 lbs.	26 00

CLINKER TONGS

Each	\$1 50
------	--------

CLIPS

Damper	
No-Rivet Steel, with tail	
pieces, per gross	\$9 50
Rivet Steel, with tail	
pieces, per gross	7 50
Tail pieces, per gross	3 40

COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier	per lb. 40c
2 1/2 lb.	per lb. 45c
2 lb.	per lb. 48c
1 1/2 lb.	per lb. 55c
1 lb.	per lb. 60c

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B	Net

CUT-OFFS

Gal. plain, round or cor. rd.	
26 gauge	30%
28 gauge	25%

DAMPERS

Yankee Hot Air	
7 inch, doz.	\$1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

ADAMS No. 1 CHECK

Check and Collar Complete	
8 inch, each	2 00
9 inch, each	2 25
End Check Only	
8 inch, each	1 60
9 inch, each	1 85
Collar Only	
8 inch, each	50
9 inch, each	65

No. 2 CHECK

8 inch, each	1 00
9 inch, each	1 00
10% Disc. on Adams No. 1	
and No. 2 Check	
Diamond Smoke Pipe	
7 inch, doz.	\$2 00
8 inch, doz.	3 20
9 inch, doz.	4 80
10 inch, doz.	5 00

Adams' Sheet Metal

7 inch, doz.	\$1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

EAVES TROUGH

Galv. Crimpedge, crated	75-10%
Zinc, "Barnes"	60%

ELBOWS

Conductor Pipe	
Galv. plain or corrugated, round flat Crimp,	
28 Gauge	60%
26 Gauge	45%
24 Gauge	15%
Galv. Terne Steel	
Plain Rd. and Rd. Corr.:	
28 Ga.	60%
26 Ga.	45%
24 Ga.	15%

Square Corrugated

No. 28 Gauge	50%
26 Gauge	35%

Portico Elbows

Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested	70 & 5%
Nested Solid	70 & 5%

Sq. Corr., A. & B. & Octagon

28 Ga.	50%
26 Ga.	35%

Portico

1", 1 1/4", 1 1/2"	45%
--------------------	-----

Copper

16 oz., all designs	40%
---------------------	-----

Zinc

All styles	60%
------------	-----

ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 Gauge, Doz.	
5-inch	\$1 15
6-inch	1 25
7-inch	1 75

Special Corrugated

6-inch	\$1 00
7-inch	1 60

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform Blue,	
5-inch	\$1 60
6-inch	1 75
7-inch	2 10
WOOD FACES—60% off list.	

FENCE

736-6-12 1/4 (100 rods)	\$28 68
1948-6-14 1/4 (100 rods)	48 62

FILES AND RASPS

Heller's (American)	50-10%
American	60-10%
Arcade	50%
Black Diamond	50%
Eagle	50%
Great Western	50%
Kearney & Foot	50%
McClellan	50%
Nicholson	50%
Simonds	60%

FIRE POTS

Geo. W. Diener Mfg. Co.		No.
No. 02 Gasoline Torch, 1 qt.		\$ 12
No. 9250, Kerosene, or Gasoline Torch, 1 qt.		6 50
No. 10 Tinner's Furn. Square tank, 1 gal.		11 20
No. 15 Tinner's Furn. Round tank, 1 gal.		10 70
No. 21 Gas Soldering Furnace		8 50
No. 110 Automatic Gas Soldering Furnace		10 50

GALVANIZED WARE

Pails (Galv. after made), 10-qt.	\$3 00
Tubs (Galv. after made), No. 1	5 75
No. 2	6 50

GLASS

Single Strength, A, all brackets	35%
Single Strength, B, all brackets	37%
Double Strength, A, all brackets	35%
Double Strength, B, all brackets	37%

HANGERS

Conductor Pipe	
Milcor Perfection Wire	25%
Milcor Triplex Wire	10%
Eaves Trough	
Milcor Steel (galv. after forming) from List	50%
Milcor Selflock E. T. Wire, List	10%

HOOKS

Conductor	
"Direct Drive" Wrought Iron for wood or brick	15%

HUMIDIFIER

"Front-Rank," Automatic	
In single lots	50%
In lots of 10 or more	50-55%
In lots of 25 or more	50-10%
Vapor pans, etc., each	50%

LIFTERS

Stove Cover	
Coppered	per gro. \$6 00
Alaska	per gro. 4 75

MALLETS

Tinners	
Hickory	per doz. \$1 25

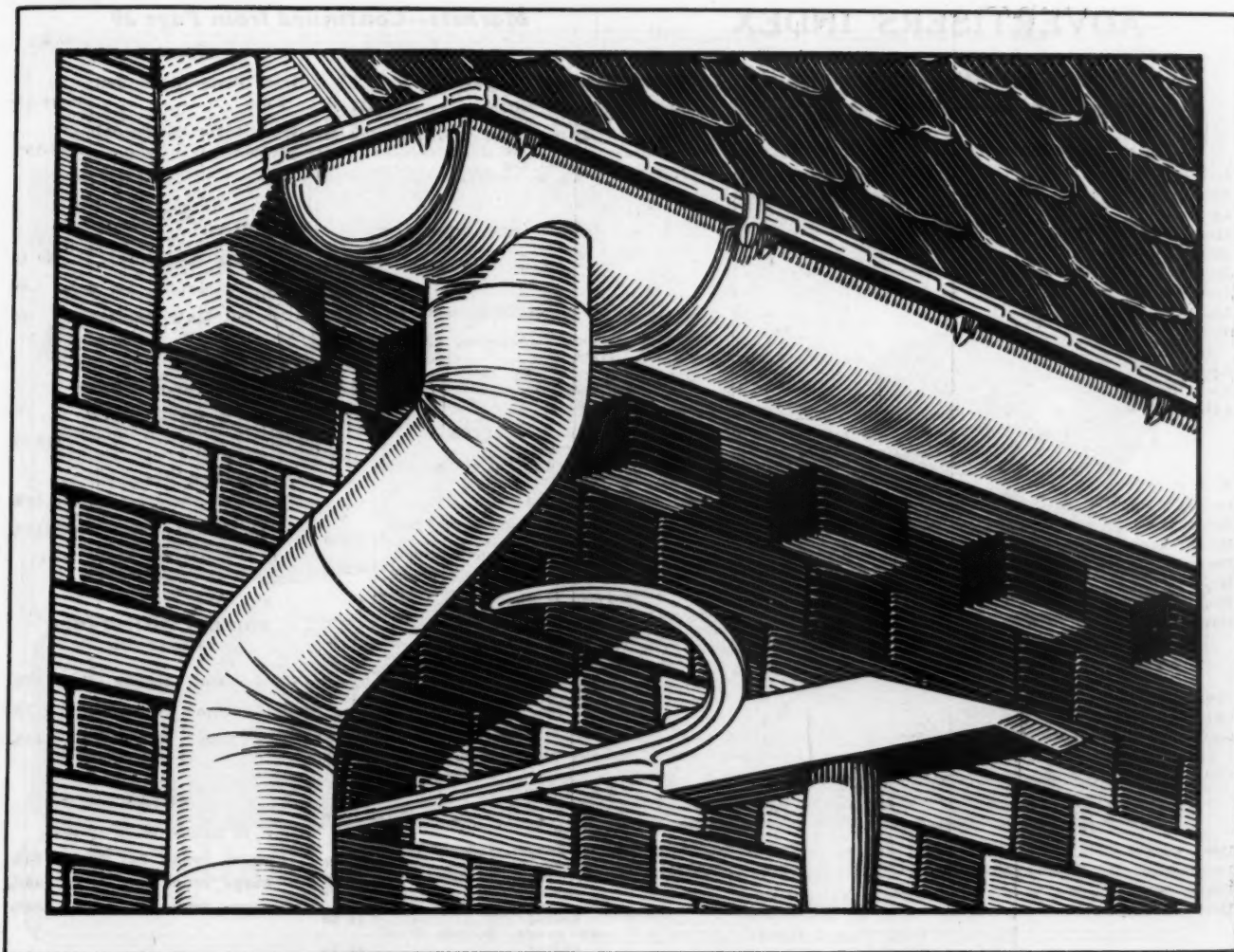
MITRES

Galvanized steel mitres	
28 Ga.	70
26 Ga.	60-20

NAILS

Cut Steel, base	\$4 00
Wire	
Common Wire, L. C. L.	3 20
Cement Coated	3 20

(Continued on page 32)



DO YOUR HOOKS DRIVE STRAIGHT AND TRUE?

THE DRIVE of the Lupton Sickle Hook is built on the I-beam principle. Like the great steel girders of a skyscraper, strength is put where it will do the most good. Lupton Sickle Hooks drive straight *and stay put!* Special notches in the shank make sure of that. And you waste no time or patience fussing with bent or broken Drives.

The Drive-head is easily hit with the hammer. You don't

have to get into a back-breaking position to drive it in. It's right out where you can put your whole wallop in the blow.

Next time you visit your jobber, ask to see one of these superior Lupton Hooks. The first time you hold it in your hands, you'll know that it's the hook you've been looking for all these years! David Lupton's Sons Co., Allegheny Ave. and Tulip St., Philadelphia, Pa.



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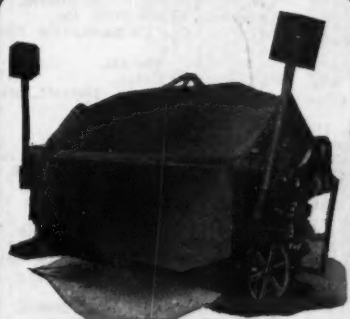
Markets--Continued from Page 30

1.

Black annealed wire, No. 9,	
per 100 lbs.	\$3 20
Galvanized barb wire, per	
100 lbs.	3 20
Cattle Wire—galvanized catch	
weight spool, per 100 lbs..	3 80
Galvanized Plain Wire, No.	
9, per 100 lbs.	3 75

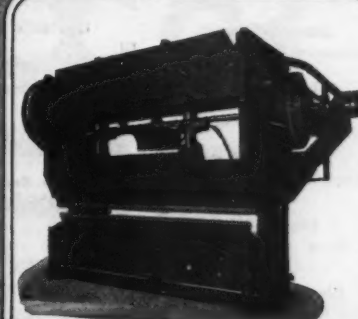
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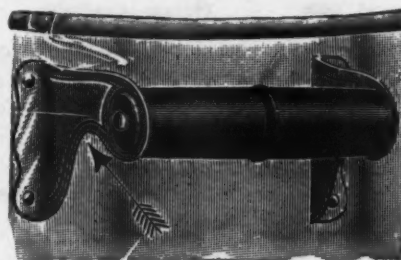
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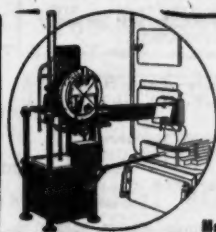
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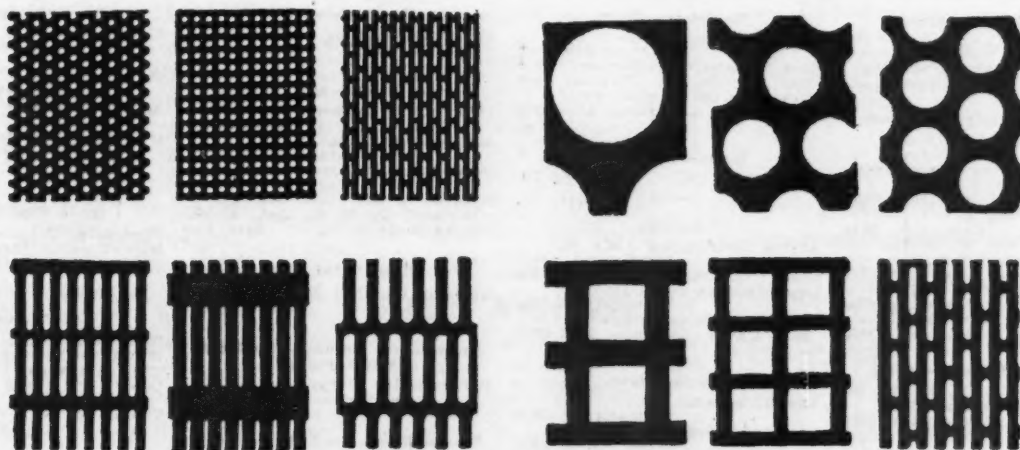
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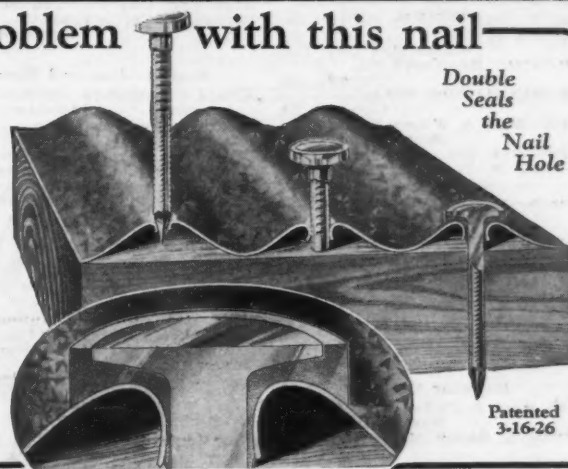
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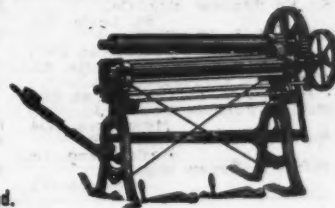
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Independent Register & Mfg. Co., Cleveland, Ohio

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Lamneck & Co., W. E., Columbus, Ohio

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Rods—Stove.

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Lamson & Sessions Co., Cleveland, Ohio

Rolls—Forming.

Bertsch & Co., Cambridge City, Ind.

Roofing Cement.

Connors Paint Mfg. Co., Wm., Troy, N. Y.

Roof—Flashing.

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Milwaukee Corrugating Co., Milwaukee, Wis.

Roofing—Iron and Steel.

Armco Distributors Ass'n of America, Middletown, Ohio

Central Alloy Steel Corp., Massillon, Ohio

Eller Mfg. Co., Canton, Ohio

Inland Steel Co., Chicago, Ill.

Milwaukee Corrugating Co., Mil., Ch'go. La Crosse, Kan. City

Osborn Co., The J. M. & L. A., Cleveland, Ohio

Ryerson & Son, Inc., Jos. T., Chgo. N. Y., St. L., Det., Cleve.

Roofing—Tin.

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Milwaukee Corrugating Co., Mil., Ch'go. La Crosse, Kan. City

Taylor Co., N. & G., Philadelphia, Pa.

Roofing—Zinc.

New Jersey Zinc Sales Co., The, New York, N. Y.

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Hart & Cooley Co., New Britain, Conn.

Schools—Sheet Metal Pattern Drafting.

St. Louis Technical Institute, St. Louis, Mo.

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St. Louis Technical Institute, St. Louis, Mo.

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Parker-Kalon Corp., 200 Varick St., New York

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Milwaukee Corrugating Co., Mil., Ch'go. La Crosse, Kan. City

Parker-Kalon Corp., 200 Varick St., New York

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Harrington & King Perforating Co., Chicago, Ill.

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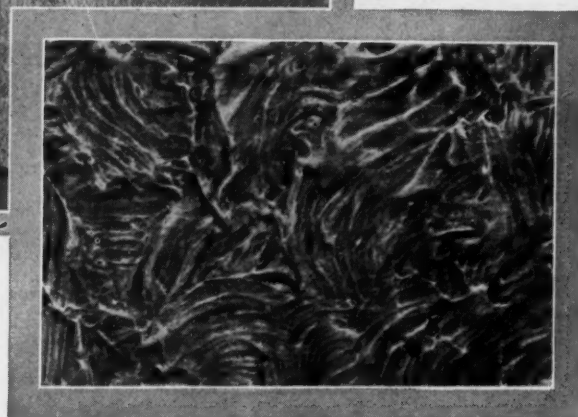
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